New York State Department of Environmental Conservation

Division of Fish, Wildlife, and Marine Resources
Bureau of Marine Resources

A STUDY OF THE STRIPED BASS IN THE MARINE DISTRICT OF NEW YORK STATE

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ABSTRACT

This report is a final summarization of the data collected during the field season, which concluded during October of the September 1, 2006 – August 31, 2007 time frame of the Anadromous Fish Conservation Act Grant # NA06NMF4050066, as well as a comparison to the previous twenty-two years.

Job 2: The 2006 Western Long Island (WLI) Beach Seine Survey captured 1,517 striped bass in 185 seine hauls from May through October. Striped bass ranged in size from 29 to 890 mm total length (TL), and in age from 0 (young-of-the-year) to 9. Yearling dominated, accounting for 45.3% of the striped bass catch, followed by three-year olds (21.8%). This resulted in an increase in the WLI yearling index (2.02 fish/haul) from the 2005 value (0.64 fish/haul), bringing it above the twenty-three year average (1.32 fish/haul). Meanwhile, the 2006 WLI young-of-the-year (YOY) index (0.72 fish/haul) decreased from the 2005 value (2.43 fish/haul), remaining below the twenty-three year average (3.38 fish/haul). Young-of-the-year accounted for 14.0% of the 2006 striped bass catch. Nine hundred twenty-eight striped bass were tagged and released during the 2006 efforts. These bass ranged in age from 1 to 9, and in size from 166 to 931 mm TL. One thousand two hundred twenty-nine tagged striped bass have been recaptured at least once since 1987. Hook and line was the dominant recapture gear (90%). The majority of the recaptures were released alive (86%). Survival rates were estimated using a model, which incorporates time and age specific survival and reporting rates for ages 1, 2, and older striped bass; survival rates increased sequentially by age. Yearling striped bass survival continued its slightly positive trend, while age 2 and older continued their slightly negative trends.

Job 1: An Investigation of the Hudson River Striped Bass Spawning Success, was subcontracted to Dr. David Conover at the Marine Sciences Research Center, State University of New York at Stony Brook, with funding through the Hudson River Estuary Program. The 2006 Hudson River YOY index (3.82 fish/haul) decreased from the 2005 value (8.48 fish/haul), and remained below the historical average (13.87 fish/haul). NYS DEC had close oversight of the survey, and the resulting report is attached.

JOB 2. An Investigation of the Movements and Growth of the 2005 Hudson River Year Class in Western Long Island Bays

Hudson River striped bass generally spend their first year of life in nursery areas in the lower Hudson River. The following spring, one-year old (yearling) striped bass are found in the Hudson River and in the bays around western Long Island (WLI), as reported by a number of authors (Alperin, 1966; Texas Instruments, Inc., 1977; Young, 1980, 1982, 1986, 1987; Young and McKown, 1987; McKown and Young, 1988; McKown and Young, 1989; McKown, 1991a; McKown, 1991b; McKown, 1992; McKown and Penski, 1994; McKown and Savona, 1994; McKown et al., 1996; McKown and LoBue, 1996; LoBue and McKown, 1998; McKown et al., 1999; McKown and Gelardi, 2000; McKown and Brischler, 2001a; McKown and Brischler, 2001b; McKown and Brischler, 2002; Brischler, 2004; Brischler 2005; Socrates 2005; and Socrates 2006). The New York State Department of Environmental Conservation (NYSDEC) commenced the current investigation of yearling striped bass in 1984. The primary purpose of this study is to examine those striped bass, which have migrated out of the Hudson River as one and two-year old fish. The 2006 survey received financial support from the Sport Fish Restoration Account of the Aquatic Resources Trust Fund (D-J), and P.L. 89-304 the Anadromous Fish Conservation Act.

The present work will provide details of the 2006 collections, which concluded during the September 1, 2006 – August 31, 2007 span of the Anadromous Fish Conservation Act grant # NA06NMF4050066, and a comparison with those collections made from 1984 through 2005. The objectives of this study are: 1) to collect size and age data from older striped bass captured; 2) to estimate growth rates of the juvenile striped bass in the nursery areas of western Long Island and New York Harbor; 3) to use tag recapture data to estimate total annual survival rates; 4) to develop an index of relative abundance of yearling striped bass in western Long Island bays; 5) to develop an index of relative abundance of young-of-the-year (YOY) striped bass in western Long Island bays; and 6) to examine the tagging data to assess the possibility of determining emigration rates of sub-adult striped bass in western Long Island bays.

METHODS AND MATERIALS

Department personnel conducted a standard series of seine hauls in the bays primarily around western Long Island (Figure 1), using a 200-foot x 10-foot beach seine with 1/4 inch square mesh in the wings, and 3/16 inch square mesh in the bunt. A 500-foot x 12-foot beach seine was not used in 2006. The 500-foot net was used for three trial hauls in 2002, but had previously not been used since 1997 due to staffing limitations, and will most likely not be used again for this particular project since the mesh size does not effectively target YOY and smaller yearling striped bass. Figure 2 presents the number of seine hauls by gear; the number of hauls completed using the large net decreased over time. Since the majority of the sampling has been conducted with the 200-foot net (Figure 2), the data from hauls using only the 200-foot net was subset out for tables of total length, age, species composition, and other species information. Data comparisons between the 200-foot net and the 500-foot net can be seen in previous reports (McKown and Brischler, 2002; and Brischler, 2004).

All fish were identified and counted for each seine haul. A random sample of up to 30 individuals for most species, including commercially or recreationally important species, was measured for total lengths (TL). All striped bass were measured for total length. Striped bass measuring 170 mm TL, and larger, were also weighed and tagged with internal anchor tags supplied by the United States Fish and Wildlife Service (USFWS). These fish were tagged according to guidelines established by the USFWS coast-wide tagging program. Scale samples were taken from each striped bass, from the area between the two dorsal fins and above the lateral line. The samples were returned to NYSDEC Marine Resources headquarters, where scale impressions were made using GG grade 0.04 inch, clear cellulose acetate, in a Carver Model C laboratory press. Three viewers read the samples independently, and disagreements were evaluated together. If consensus could not be reached, the sample age was rejected. Striped bass that were large enough to be from the 1995 or previous year-classes were checked for binary coded wire tags (BCWT) using a tag detector from Northwest Marine Technology, Inc. to determine if they were hatchery released. The last year of hatchery releases from the Hudson River and Chesapeake Bay was 1995. If hatchery released striped bass were collected, the BCWT was removed and sent to the USFWS.

In the event that a large number of fish were captured, a sub-sampling technique was used to estimate their number. A known volume of fish were identified and counted to develop a multiplier. The volume of the remainder of the sample was expanded to obtain an estimate of the number caught. Since some YOY had not been measured in the past, due to this sub-sampling technique, the lengths for those bass were estimated using the proportion at size for the YOY for those particular hauls. During 2006, all but 14 YOY striped bass were measured.

The following information was also recorded at each station: net size, station location, station number, date, time, tidal stage, weather conditions, gear handling, and sample handling evaluation. Water temperature, salinity, and dissolved oxygen were measured using a YSI multi-probe, and air temperature was measured using a hand-held thermometer.

The results of the 2006 investigations are summarized below. In addition, comparisons to the collections from 1984 through 2005 are presented.

RESULTS AND DISCUSSION

One hundred eighty-five seine hauls were made, on 36 dates, between May 10, 2006 and October 26, 2006. Sampling occurred primarily, and most consistently, in Jamaica Bay (JAM) on the south shore, and Little Neck (LNB) and Manhasset (MAN) Bays on the north shore. Other bays sampled included Hempstead Harbor (HEM) and Oyster Bay (OSB) on the north shore. Port Jefferson Harbor was eliminated from the sampling effort during 2006 due to its consistently low abundance of juvenile striped bass. Sampling has also been limited on the south shore of central Long Island, even though it has areas where juvenile striped bass have been captured in the past, due to accessibility. These efforts captured 1,517 striped bass, 80% of which were caught in north shore bays.

Age Frequency

In 2006, ten year-classes (YC) of striped bass were represented in the bays of western Long Island. The 2006 WLI striped bass age frequency is presented in Table 1 and Figure 3. Striped bass were captured from May through October, with the highest number caught in August, which also had the highest catch per unit effort (CPUE=14.5). Age groups one through

three contributed 82% of the age samples. These three age classes represented 59% of the catch in the 2005 sampling. During 2006, yearling striped bass (2005 YC) accounted for 45.3% of the catch, up from 34.4% as YOY during 2005 sampling. Meanwhile, three-year old fish (2003 YC) co-dominated by accounting for 21.8% of the catch. The co-domination of the 2003 year-class as YOY during the 2003 sampling season, its domination during the 2004 sampling season, its co-domination during the 2005 sampling season, and now it's co-domination again, helps to confirm that striped bass recruit to western Long Island bays as one-year olds and often remain in these estuaries as 2 and 3-year olds. Finally, YOY (2006 YC) accounted for 14.1% of the catch. Most of the YOY were captured in August (89%).

In most years, the catch in Little Neck Bay, on the north shore, had the most complete range of ages (0-13). During 2006, Little Neck Bay continued this trend with eight of the fourteen age classes. When looking at the catch in all bays, yearling dominated on the north shore, accounting for 36% of the catch, with 25.5% being three-year olds, 17.5% YOY, and 17% two-year olds. The catch in Jamaica Bay, again accounting for 20% of the striped caught in 2006, was dominated by yearling (83%), followed by three and two-year olds (7% and 6.7%, respectively).

A comparison of age frequencies for 1984 through 2006, is presented in Table 2 and Figure 4. Little Neck Bay and Manhasset Bay on the north shore had the largest range of ages in most years, while the catches on the south shore have been dominated by one or two year-classes.

Since 1987, YOY have been caught in north shore bays annually (Table 2 and Figure 4). In many years, they dominated the catch in Little Neck Bay and Manhasset Bay, although some years they did not dominate the catch in any bay, as in 2002 and 2004. Catches of YOY in Jamaica Bay have been low and sporadic, except during 1999-2001, and 2003. YOY are usually caught in north shore bays sometime between late June and August, due to variability in recruitment and sampling. Table 3 and Figure 5a present three indices of relative abundance (geometric means of CPUE) for YOY in Little Neck and Manhasset Bays, for three subsets of data; July through October, July through August, and August alone. The indices that are based on data from July through August and July through October are essentially the same until 1999-2001, when the July through August index is higher. The index that is based only on August data has spikes in 1993, 1996, 1999, and 2000. All three indices have been similar to each other

since 2002. Work may still be needed to find the best estimate of relative abundance for YOY in WLI, however the index that is based on data from July through October was used in the comparison to the Hudson YOY index (Figure 5b). From 1987 to 1999, the Hudson YOY index was much higher than the WLI YOY index. During 2000, however, the Hudson produced a below-average index while the WLI index was an order of magnitude higher than any other in the time series. The indices have since had similar patterns, although WLI index did not see as dramatic of a decrease in 2006 as the Hudson index. During 2006, the WLI index (0.72 fish/haul) was considerably lower than the 2005 value (2.43), but was slightly higher than the 2004 value (0.4). The 2006 WLI index was, therefore, still below its historical average of 3.50 fish/haul. The Hudson index was also below average, and was almost as low as the most recent plummet of the 2000 index.

Yearlings have dominated the total catch in most years, except for 1986 and 1990, when age two dominated, 1993 when yearling and age two were co-dominant, 1999 - 2001 when YOY dominated, and 2003 and 2005 when YOY and age two were co-dominant. Table 4 presents an index of relative abundance (geometric mean of CPUE) for yearling striped bass, based on data from May through August, which has been sampled most consistently throughout the time series. A comparison of the yearling indices, computed from data collected from all gear sizes and the 200-foot seine hauls alone, can be seen in Figure 6a. Since gear did not have a significant effect on age-1 catches (McKown and Brischler, 2002; and Brischler, 2004), the original index calculated from all gears will be used. The 2006 yearling abundance was 2.02 fish/haul, which was above the historical average of 1.29 fish/haul. Except for 2003 and 2005, the yearling index has been above its long-term average since 1998, with the highest index in the time series from 2002 (2.53 fish/haul), and the second highest from 2004 (2.41 fish/haul). Yearling caught in 2003 were from the 2002 year-class, 2005 yearling were from the 2004 year-class, which were both below average in the Hudson YOY index and the WLI YOY index. It is satisfying to see that the yearling index follows the general trends of the YOY indices, for most year-classes, but with much less variability (Figure 6b). This, along with the positive slope of yearling index, continues to support the hypothesis that the nursery area for Hudson River YOY striped bass has expanded, and that the fish are recruiting as one-year olds.

Length Frequency

The 2006 WLI striped bass total length frequency, and the north and south shore total length frequencies, are presented in Figure 7. Striped bass ranged in length from 29 to 890 mm TL, with 47% between 100 - 250 mm TL. A comparison of lengths between fish caught on the north shore to fish caught on the south shore, shows that the north shore continues to have a large range of sizes, not dominated by any particular length range, and the south shore surprisingly also had a broad size range, but was dominated by the 100 - 150 mm TL bin range. Total length frequency by month and by bay is presented in Table 5. The range of lengths is similar among months, with the broadest length range occurring in June. A comparison of total length frequencies for 1984 through 2006 is presented in Table 6 and Figure 8. The comparison shows that the 1990 and 1986 modes from all bays combined were larger than all other years, until 2003, which surpassed both years. The 2003 mode for the south shore was the largest compared to other years as well.

Mean total length-at-age for the striped bass caught during 2006 is presented in Figure 9. There is a significant linear increase in length by age (prob = 0.0015). The regression equation has a slope of 107.8 and the intercept is 89.3 ($R^2 = 0.98$). A comparison of mean TL for the 1984 through 2006 year-classes, at ages zero through four, is presented in Figure 10. Each year-class also showed a significant linear increase in mean TL by age ($R^2 = .94 - .99$). The mean lengths of each age group have not differed significantly over the past 23 years.

Mean weight-at-age for 2006 is presented in Figure 11. Weight increases exponentially with age. The natural log of weight versus total length is presented in Figure 12. The weight-length relationship approximates isometric growth, with a slope of 2.97. A comparison of mean weight for the 1984 through 2006 year-classes, at ages zero through four, is presented in Figure 13. None of the year-classes stand out as being consistently lighter or heavier at age.

Tagging

During 1987, a tagging program was initiated in conjunction with the U.S. Fish and Wildlife Service's coast-wide striped bass tagging program. The internal anchor tags used in 1987, provided by the U.S. Fish and Wildlife Service, could only be used on fish 300 mm TL or greater. As a result, only 85 striped bass were tagged by this program during that first year. During 1988, a smaller tag was available, again from the U.S. Fish and Wildlife Service, which

could be used on fish 170 mm TL or greater. Consequently, the number of striped bass that could be tagged greatly increased, particularly for the younger, smaller fish that this project targets.

Thirteen thousand five hundred fifty-five striped bass have been tagged in the bays of western Long Island from 1987 through 2006. The number of bass tagged each year has ranged from 236 - 1212, with 2006's efforts being the sixth highest of the time series at 928. The age and total length frequencies of striped bass tagged during 1987 through 2006 are presented in Table 7. The striped bass tagged in 2006 ranged in age from 1 to 9, the majority being equally ages 1 and 3 (35% each), and in size from 166 mm to 890 mm total length.

Striped bass tagged in Long Island bays have been recaptured from as far north as New Brunswick, Canada, and as far south as Kitty Hawk, North Carolina. Table 8 presents a summary of first recapture event information by year of release and years at large, from 1987 through 2006. Of those released, an average of 3.5% are recaptured within the same year and 3.5% are recaptured one year after being released. There have been 1,229 first recapture events in at least 12 states, though most have occurred in New York (76%). Thirty-five percent of those 1,229 recaptures occurred within the same year as their release and 33% occurred one year after their release. Hook and line was the dominant recapture gear (90%), though recaptures also occurred in seines (4%), anchor and gill nets (1%), traps (1%), and trawls (1%). Fifty-three of the tags recaptured via seines represent those recaptured by this survey, all but one of which were recaptured in the same bay in which they were released. About half (46%) of the New York recaptures were also caught in the same bay as their release, even up to ten years later. Eighty-six percent of the recaptured striped bass were released alive, 11% were killed for consumption, and 2% were sold.

Survival

Survival rates were estimated using a maximum likelihood approach, developed for bird banding studies, using the software program MARK, developed by White and Burnham (1997). Fates of tags are followed annually after release; the fish either lives or dies, and if it dies the tag is either reported or not reported. A model was developed which incorporates time and age-specific survival and reporting rates for ages 1, 2, and older striped bass (Table 9). Survival and reporting rate were estimated through time by following the fish as it ages. The release-recovery

matrices are the basis for the analysis. Matrices were developed for striped bass released at age 1, age 2, and ages 3 and 4 combined. Release-recovery matrices for striped bass released from 1988 through 2006 are presented in Table 10.

A number of different models were examined, which ranged from full age and time effects to no age and time effects. In some of the models, the time effects for reporting rate were altered to estimate reporting separately or by regulatory periods. The regulatory periods are those used by the Striped Bass Technical Committee in the catch-at-age based virtual population analysis (VPA) for the striped bass stock assessment (ASMFC, 2006). A list of the different models, with their results, is presented in Table 11. The Akaike Information Criterion (AIC) was used to select the models of best fit. The models where AIC is minimized are selected as the best fitting models for the empirical data at hand, and are considered to be the *a priori* list of models. The delta AIC is the difference between any particular model's AIC and the lowest AIC of the model set. The top four models in Table 11 are considered to have the best fit, are the most parsimonious, and account for 100% of the AIC weight. The top model is the same as the top model from the previous two years, with only age effects for survival and both age and regulatory period time effects for reporting. The next two models also have only age effects for survival and both age and regulatory period time effects for reporting, however the regulatory periods are different. The remaining model has age and time effects for survival, as well as age and time effects for reporting, with the time effects representing a regulatory period.

Once the *a priori* list of models was established, a weighted average using the AIC weights of the top four model results was calculated for survival (S unadj.), and is presented in Table 12. Since the maximum likelihood approach for estimating survival was based on bird banding models developed for dead recoveries only, the survival results of this tagging study had to be adjusted for live release bias. It has been found that fish size limits, bag limits, and angler ethics result in at least 89% of recaptured fish to be released alive. The survival estimates were adjusted for live release bias using the method described by Smith et. al. (2000), in which the proportion released alive, and a reporting rate, is used to recalculate the survival rates (S adj., Table 12). In this case, the proportion released alive came from the actual dispositions reported at the time of recapture, and the reporting rate of 0.43 came from the striped bass VPA (ASMFC, 2006). The resulting survival rates for ages 1, 2, and older fish can be seen graphically in Figure 14. While survival increases with age, as seen previously, it also varies by year. The survival

estimates, calculated with the current data set, indicate that the three age groups follow a similar survival pattern, although age 1 survival seems to vary less dramatically from year to year. It is unfortunate that the survival rates for the older age groups show a slight decline over time, although the decline is slowly decreasing. Age 1 survival actually displays a slight incline, although it does seem to be leveling-off. The 2006 values may be exaggerated due to the inability of time-dependant models to produce an accurate survival rate for the current sample year.

Since first performing survival modeling in 2000, tag releases from May through August have been used for this data set even though tag releases have occurred from May through October. The May-August time frame was chosen for a few reasons. First, there have been some years where sampling effort was lower, or did not occur, in September and October. Second, catches of striped bass big enough to tag have also varied through the years. When looking at Table 13, for example, the majority of striped bass were tagged from May through August in most years, and tagging the majority of some year classes shifted months in some years. As a result, the May through August time frame was the best choice to provide an appropriate sample size for the three age classes being investigated in the survival modeling.

Since it is common for tag release studies to be performed over a short time period to reduce influences on the size of the population, with many studies even occurring over as little as a few days, it was suggested that the time frame of this tag-release data set be truncated in some way to be closer to other tag-release studies. Looking again at Table 13, the decision of which months to cut from the data set was a difficult decision. There is no single month that all age classes being studied are prevalent enough to create an ample data set. Seeing as two of the three age classes had the majority of their tag releases during June and July, however, the data set was reduced to a two month time frame to explore the effect on the survival estimates. Table 14 shows the survival rates for the June-July tag release-recapture data for ages 1, 2, and older striped bass.

When looking at the survival modeling for the June-July data set, it was comforting that the top model remained the same as the May-August data set. Actually, all of the same models in the *a priori* list for the May-August data set appeared in the *a priori* list for the June-July data set, just in a slightly different order and with the addition of one other model. The survival rates for the June-July data set were compared to the May-August data set in Figure 14. Ages 2 and

3+ survival was very similar to the original analysis, while the Age 1 survival was a bit lower than the original analysis. This is most likely due to the fact that the June–July data set contained 75%, on average, with a range of 41%-98% of the original Age 2 and 3+ sample sizes, while it only contained 60%, on average, with a range of 28%-90% of the original Age 1 sample size.

When comparing the 2006 and June-July survival estimates with past data sets, it is seen that survival seems to fluctuate around a similar value for each age (Figure 15). Age 1 survival, for example, seems to fluctuate around 0.3, Age 2 survival fluctuates around 0.5, and Age 3+ survival fluctuates around 0.73. Survival estimates for 1996 – 2001, for age 1 fish, seem to be fairly consistent from the 2001 – 2006 data set calculations. The older age group estimates vary a bit more, but it is reassuring that a majority of the estimates are still fairly close between data sets. Hopefully, as the data set matures, the survival estimates will continue to tighten around a specific value for each age group and each year. As always, it will be interesting to see if the same models, where survival has age and regulatory period time effects, come up as best-fitting again next year, but it will also be interesting to see how future data helps complete the story for 2006 and the declining trend of older fish survival rates. Furthermore, it will be interesting to see if a truncated data set will be more appropriate for the analysis.

Species Composition

Species composition and CPUE for 2006 is presented in Tables 15 and 16. YOY striped bass ranked 13th with a CPUE of 1.2 fish/haul, while older striped bass ranked 7th with a CPUE of 7.0 fish/haul. A comparison of species composition from 1984 through 2006 is presented in Table 17. Older Striped bass have ranked in the top ten species twenty out of the twenty-three years, and YOY striped bass have ranked in the top ten species nine out of twenty-three years. *Menidia sp*. were the most abundant species in all years except, 1999 and 2003 where Atlantic menhaden were the most abundant, 1986 where Atlantic herring were the most abundant, and 1984-85 where Fundulus sp. were the most abundant. A comparison of some of the most abundant bait fish species, caught 1986-2006, can be seen in Figure 16a. In all, 106 species of fish have been captured during the twenty-three years of this study, 49 of which were seen in 2006. One species, wahoo (*Acanthocybium solanderi*), was caught for the first time during this study. The five juvenile wahoo were all caught together in Jamaica Bay. Another species,

fourspot flounder (*Paralichthys oblongus*) was caught for only a third time in the survey's history, with its other encounters being in 1989 and 1991.

Along with fish species, several species of crustaceans, invertebrates, and other non-fish have been encountered (Tables 15, 16, 17). Among the most common are blue crabs, calico crabs, horseshoe crabs, green crabs, and spider crabs. A comparison of some of the most abundant crab species, caught 1986-2006, can be seen in Figure 16b. Notably, the 2006 blue crab abundance was above the long term average and the invasive Japanese shore crab abundance continued to increase. Abundances for calico, green, and spider crabs all dropped since 2005.

Community Structure

Community structures of the three primary bays of western Long Island, Little Neck, Manhasset, and Jamaica Bays, were examined from 1986 through 2006. Throughout that time, the number of species caught each year ranged from 17 to 35 in Little Neck Bay, from 15 to 45 in Manhasset Bay, and from 27 to 42 in Jamaica Bay (Table 18). The diversity in Manhasset Bay was at its lowest during 2006. Marine species remain predominant, and account for approximately three quarters of the species caught. The remaining species remain divided almost equally between Diadromous and Estuarine species, with an occasional small percentage of Freshwater species caught.

Several commercially and recreationally important species were found to be included in the five most abundant species of those primary bays (Table 19). During the last twenty-one years, striped bass ranked in the top five sixteen times in Little Neck Bay, eleven times in Manhasset Bay, and six times in Jamaica Bay. Winter flounder also ranked in the top five sixteen times in Manhasset Bay, fourteen times in Jamaica Bay, and six times in Little Neck Bay. Meanwhile, bluefish ranked in the top five thirteen times in Jamaica Bay, seven times in Manhasset Bay, and only twice in Little Neck Bay. Species of silversides (mostly Atlantic silversides) have been the most abundant species in all three bays for most years, ranging from 10 to 97% of each bay's catch each year.

Other Species Catch Effort and Length Data

Catch data for all other species has been recorded on an annual basis. Starting in 1986, length measurements of some other species of interest were added to the data collection. Since 2001, almost every species caught has a sub-sample of individuals measured for total length. Only a few species of interest are noted here. Bluefish, for example, were caught on both the north and south shores of Long Island during 2006, from June through October, with the highest catch efforts for young-of-the-year occurring in Hempstead Harbor and the month of August (Table 20). Historically, the majority of bluefish have been caught from June through September and peaking in July or August, although 1990, 1998, and 2002 catches peaked in September. Sampling was not conducted in September and/or October, however, in 1984-1986, 1991, 1993, 1995, and 1999. The largest bluefish catches occurred during 1987, followed by 2001 and 2000. When looking at catch effort by bay, YOY bluefish had been most abundant in Oyster Bay since sampling commenced there in 2001, although that changed in 2005 and 2006. Prior to that, catches were highest in Manhasset Bay during 2000, and Jamaica Bay from 1994-1999.

In order to have a better sense of YOY bluefish CPUE, calculations were based on catches from July and August using a 200-foot seine, due to sampling consistency. The CPUE of YOY bluefish is presented as arithmetic mean (AM) and geometric mean (GM) in Figure 17. The two indices show similar trends, although some of the peaks and valleys are dramatized differently, most likely due to the reduced emphasis of large catches by the geometric mean. Both indices have peaks in 1989, 1991, 1997, 2001, and 2005, with below average abundance through the 1990's, 2002-2004, and 2006. Conflicting values of CPUE occur in 1987, 1988, and 2000. The highest CPUE values occurred in 2001 for the GM and in 1987 for the AM.

Bluefish total length frequency by bay and month for 2006 is presented in Table 21, and a comparison of 1986 through 2006 length frequencies is presented in Table 22. Most of the bluefish caught were spring-spawned YOY, although a few summer-spawned YOY were encountered starting in August. Summer-spawned bluefish have been encountered during the late summer and early fall for each of the past eight years, as well as during 1992, 1990 and 1987.

Winter flounder were caught throughout the whole 2006 survey, from May through October, on both shores of Long Island. The highest catch efforts of winter flounder were during the month of June, and in Jamaica Bay (Table 23). Historically, winter flounder have been

caught from May to October, with the majority caught in June or July, although no sampling was conducted in September and/or October in 1986, 1991, 1993, 1995, and 1999, and most frequently in Manhasset Bay. Winter flounder abundance, presented as CPUE in Figure 18, has been generally sporadic, but with a positive trend, and rose to an all-time high in 2003. Unfortunately, the 2006 CPUE returned to below-average values. Total length frequency by bay and month for 2006 and a comparison of 1986 through 2006 length frequencies, is presented in Table 24. Most of the winter flounder caught were young-of-the-year, although some larger fish were captured in May on the north shore.

Meanwhile, most of the summer flounder caught in 2006 were older fish, and again occurred most frequently during August and in Jamaica Bay (Table 23). Summer flounder abundance has remained low throughout the study's time series (Figure 18). The highest CPUE occurred in 1991, and has been below the series average since 1996. In the past, summer flounder were caught mainly from May to August, with high catch efforts most frequently during June. Summer flounder catches spread into October in only 3 of the 23 years, 1994, 2004, and 2005, although no sampling was conducted in September and/or October in 1986, 1991, 1993, 1995, and 1999. Total length frequency by bay and month for 2006 and a comparison of 1986 through 2006 length frequencies, is presented in Table 25.

The abundance of Atlantic tomcod and American eel are presented in Figure 19 and Table 26. Atlantic tomcod were caught only in May and June, unlike the previous three years, and in only three bays (Hempstead, Little Neck, and Oyster). The peak catch efforts occurred during May and in Little Neck Bay, which is consistent with past catches. Tomcod CPUE has fluctuated over the time series but had been increasing since the series' lowest CPUE in 2002, reaching an above average value in 2005. Unfortunately the 2006 abundance dropped to below the time series' average. Total length frequency by bay and month for 2006 and a comparison of 1986 through 2006 length frequencies, presented in Table 27, shows that tomcod are caught as YOY.

The abundance of American eels (Figure 19) has been low during the whole time series, with higher catches in the 1980's. The slight increase during 2003 was due to catches of glass eels in Jamaica Bay. Historically, eels have been caught mostly from April through August, but those caught during 2006 were encountered in September (Table 26).

Weakfish, and tautog abundance are presented in Figure 19 and Table 28. Weakfish have only been caught during 14 of the past 23 years of the survey. Catches started high in 1984 and crashed in 1985, where it remained low until 2001. The abundance was even higher in 2002, but crashed again in 2003. Weakfish have been caught mostly as YOY in Little Neck Bay and during July or August, but have been most abundant in Oyster Bay for the past 3 years.

Tautog, also called blackfish, are caught on both the north and south shores of Long Island, with the majority usually caught in Port Jefferson Harbor. Catches occurred from May through October, with the majority caught in July, which is earlier than most years (Table 28), and in Hempstead Harbor. The abundance of tautog (Figure 19) had spiked in 1991, remained relatively low and constant from 1992 to 1998, and had since been following an above-average, yet sporadic, trend. This is most likely a result of increased sampling effort in Port Jefferson Harbor. During 2006, however, no sampling was conducted in Port Jefferson Harbor, causing the abundance to drop. Total length frequency by bay and month for 2006 and a comparison of 1986 through 2006 length frequencies, is presented in Table 29. The majority of tautog caught by the study have been young-of-the-year and juveniles.

The abundance of three species of Alosids are presented in Figure 20. Alewife CPUE has fluctuated over the past twenty years, with a high in 1988, and again in 2002. American shad CPUE has been steadily low throughout the study, with a slight above-average rise in 1990, 1996, and 2001. Blueback herring CPUE fluctuated, although low, until 1991 when it spiked dramatically only to crash again in 1992, where it had remained below average even with a slight rise in 2003 and 2005.

Environmental Data

North shore and south shore bi-weekly and monthly averages, of the environmental data collected during 2006, can be seen in Table 30. North shore values were collected in Little Neck and Manhasset Bays, and south shore values were collected in Jamaica Bay. Both shores seemed to follow similar patterns when comparing mean air temperatures, water temperatures, and dissolved oxygen as seen in Figure 21. Some monthly values changed more dramatically on the north or south shore, such as July mean water temperatures and June mean bottom dissolved oxygen. Salinity patterns differed in some months on the two shores. During 2005, both surface and bottom salinity patterns were remarkably similar between shores, but 2006 showed that the

north shore surface salinities fluctuated more than the south shore. A comparison of monthly averages from 1984 – 2006, and monthly bottom averages from 1998 – 2006, can be seen in Tables 31 and 32. Measurements worth mentioning include both shores' mean surface and bottom salinities were the lowest in the last 21 years, while both north and south shore mean surface and bottom water temperatures and dissolve oxygen were above average.

SUMMARY

One thousand five hundred seventeen striped bass were caught in 185 seine hauls during 2006. One-year old bass dominated, accounting for 45% of the catch. During 2006, YOY striped bass were caught mostly in Little Neck Bay. The 2006 WLI YOY abundance index was well below the long-term average. Meanwhile, the yearling bass index was above the long-term average, continuing the positive trend for yearling bass abundance.

Thirteen thousand five hundred fifty-five tagged striped bass have been released since 1987, into western Long Island bays. Nine hundred twenty-eight were released in 2006. One thousand two hundred twenty-nine of the 13,555 tagged striped bass have been reported to the USFWS as recaptured. Recaptures have occurred from as far north as New Brunswick, Canada, and as far south as Kitty Hawk, North Carolina, with the majority occurring in New York. Hook and line has been the dominant recapture gear, and the majority of the recaptured striped bass have been released alive (86%). Based on tag returns, survival rates for age 1, 2, and older striped bass were estimated using time and age specific models. The model with the best fit had only age effects for survival, but both age and regulatory period time effects for reporting. One of the four best fitting models had age and time effects for both survival and reporting rate. Survival rates increase sequentially by age for all years, but it is unfortunate that the survival rates for the older age groups show a slight decline over time. A truncated data set was also analyzed for survival rates for age 1, 2, and older striped bass, even though it did not include the majority of age one tags. Age 2 and older survival rates were similar to the original analysis, but age one survival was lower. Further analysis and perhaps a slightly less truncated data set should be investigated to achieve a more realistic sample size for the modeling of the project's targeted yearling striped bass.

During the 2006 sampling, one new species was caught, wahoo, and one species, fourspot flounder, was caught for only a third time in the survey's history. CPUE for bluefish, winter flounder, summer flounder, tautog, weakfish, blueback herring, and Atlantic tomcod were down from 2005 efforts. CPUE for alewife, horseshoe crabs and Blue crabs were up from 2005 efforts. CPUE for American shad remained low. Almost all baitfish CPUEs were down from 2005 efforts.

Finally, overall environmental conditions around western Long Island during the 2006 season seemed to be above average on both shores, except for salinities. As in 2005, mean surface and bottom salinity values were the lowest in the last 21 years on both the north and south shores of Long Island.

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TABLE 1 2006 WLI STRIPED BASS AGE FREQUENCIES

AGE	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL	%
0	0	0	2	189	20	2	213	14.0
1	125	262	104	166	9	17	683	45.0
2	16	43	135	24	4	4	226	14.9
3	16	76	141	76	9	11	329	21.7
4	2	22	9	5	1	1	40	2.6
5	2	3	1	3	1	0	10	0.7
6	2	1	0	0	0	0	3	0.2
7	0	0	1	0	0	0	1	0.1
8+	0	2	0	0	1	0	3	0.2
NO AGE	0	2	4	2	1	0	9	0.6
TOTAL	163	411	397	465	46	35	1517	
# SEINES	32	30	31	32	30	30	185	
C/E	5.1	13.7	12.8	14.5	1.5	1.2	8.2	

AGE	HEM	JAM	LNB	MAN	OSB	TOTAL	%
0	0	1	210	2	0	213	14.0
1	21	246	373	42	1	683	45.0
2	30	20	119	51	6	226	14.9
3	16	21	115	131	46	329	21.7
4	1	6	6	11	16	40	2.6
5	0	1	3	3	3	10	0.7
6	0	3	0	0	0	3	0.2
7	0	0	1	0	0	1	0.1
8+	2	0	1	0	0	3	0.2
NO AGE	0	2	3	2	2	9	0.6
TOTAL	70	300	831	242	74	1517	
# SEINES	27	59	35	34	30	185	
C/E	2.6	5.1	23.7	7.1	2.5	8.2	

TABLE 2 COMPARISON OF WLI STRIPED BASS AGE FREQUENCIES FROM 1984 - 2006

LOCATION**	YEAR	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	UNK	TOTAL	SEINES
NORTH SHORE																			
LITTLE NECK BAY	1984		688	152	17	2	3	2									286	1150	26
	1985		9	5	2												1	17	11
	1986		4	44	54	14	9						1	1			6	133	35
	1987	9	29	3	3	2											0	46	34
	1988	176	298	26	2	8	11	2	2	2					1		8	536	40
	1989	37	136	104	22	1	3		2		1						7	313	29
	1990	18	80	89	17	6	2	2	3	1							6	224	38
	1991	177	112	174	112	29	4	2	4	1	2	1	3				10	631	22
	1992	147	186	106	18	11	8	1	1	1		1					12	492	30
	1993	189	30	78	28	8	3	3	2	2		1		1			10	355	29
	1994	13	340	92	17	3	2	2	1	1							25	496	30
	1995	5	30	35	4	1	1						1				3	80	21
	1996	132	33	39	12	1	1										0	218	26
	1997	108	194	14	7	3		1									3	330	20
	1998	109	40	52	13	3	1	2	1								3	224	25
	1999	438	128	27	11	7	1	1									2	615	36
	2000	11286	272	22	5	5	2	1	3								4	11600	36
	2001	1126	95	40	2	4		2	2	1							0	1272	29
	2002	60	58	129	20	9		3		1							3	283	29
	2003	196	120	92	24	9	1	5	1								4	452	40
	2004	55	304	82	31	8			1		1						2	484	39
	2005	311	143	49	8	3	3	1	1				1				4	524	30
	2006	210	373	119	115	6	3		1		1						3	831	35
MANHASSET BAY	1984		33	20	3	4											0	60	29
	1985		36	4													0	40	18
	1986		6	77	13	11	8										0	115	34
	1987		9	8	14	2	1										0	34	39
	1988	8	73	48	5	2	2	1									2	141	26
	1989	7	87	41	8	1	3		1								3	151	32
	1990	14	7	54		1											0	76	20
	1991	28	195	92	22	2	1			1	1						4	346	32
	1992	115	54	5	10	4	2										2	192	31
	1993	111	254	141	18	2	1			1							9	537	25
	1994	50	336	184	50	9	5	1		1							83	719	25
	1995	18	49	22	5	2											3	99	20
	1996	106	179	35	8			1									0	329	30
	1997	176	100	28	5	4			2								10	325	25
	1998	291	208	140	12	5											72	728	22
	1999	275	304	115	19	8	3										3	727	27
	2000	7088	310	66	13	3	4	1		1							81	7567	40
	2001	1453	405	53	12	3	1										0	1927	38
	2002	71	313	570	50	15	10	4	1	1							8	1043	42
	2003	320	92	261	64	14	1	1									2	755	40
	2004	14	329	75	64	15	7	1	1	1	1			1			5	514	41
	2005	83	19	122	42	20	5										1	292	30
	2006	2	42	51	131	11	3										2	242	34
HEMPSTEAD HBR.	1984		8	4			1										0	13	22
	1986						1										1	2	8
	1987				2		1										1	4	23
	1988		1			1	1										0	3	19
	2005	3		1	1												0	5	4
	2006		21	30	16	1				1	1						0	70	27
OYSTER BAY	2001	3	1	12	13	6	2	1			1	1					0	40	22
	2002		26	10	2	1	1										0	40	21
	2003		15	26	28	6	3			1							0	79	28
	2004		36	20	24	11	2	1	1	3							1	99	29
	2005			179	20	22	4	2	2	2		1				1	2	235	29
	2006		1	6	46	16	3										2	74	30
PORT JEFF. HBR.	1994				1												0	1	10
	2001																1	1	25
	2002			3													0	3	27
	2003			2	3	2				1							0	8	38
	2004				3	3	2										0	8	25
	2005			20		1	1										0	22	21

TABLE 3 WLI YOY STRIPED BASS ABUNDANCE INDICES 1984 - 2006

	July through October+				July through August				August			
YEAR	SEINES*	GM (fish/haul)	LCI**	UCI	SEINES*	GM (fish/haul)	LCI**	UCI	SEINES*	GM (fish/haul)	LCI**	UCI
1984	25	0.0			25	0.0			14	0.0		
1985	4	0.0			4	0.0			4	0.0		
1986	21	0.0			21	0.0			5	0.0		
1987	33	0.1	0.0	0.3	26	0.1	0.0	0.3	9	0.3	0.0	0.9
1988	21	0.9	0.1	2.2	11	1.8	0.2	5.7	4	2.5	0.0	27.4
1989	34	0.4	0.1	0.8	19	0.8	0.2	1.7	12	1.6	0.6	3.2
1990	23	0.2	0.0	0.5	19	0.2	0.0	0.6	7	0.8	0.0	2.3
1991	18	2.8	1.2	5.6	18	2.8	1.2	5.6	7	3.7	0.5	13.5
1992	29	3.4	2.0	5.4	14	3.1	1.2	6.6	7	3.7	0.7	12.3
1993	23	3.0	1.4	5.7	23	3.0	1.4	5.7	8	14.1	5.1	36.3
1994	30	0.5	0.1	1.0	18	0.5	0.0	1.3	7	2.0	0.4	5.4
1995	14	0.6	0.1	1.3	14	0.6	0.1	1.3	8	1.2	0.3	2.9
1996	26	2.4	1.2	4.3	13	3.7	1.6	7.7	3	34.8	14.7	80.7
1997	22	2.8	1.2	5.6	7	0.1	0.0	0.3	3	0.3	0.0	0.8
1998	30	2.4	1.1	4.4	13	3.2	0.8	9.1	6	21.8	8.7	52.9
1999	23	7.9	4.1	14.6	15	20.7	10.6	39.6	4	44.7	11.4	167.2
2000	45	30.3	16.6	54.8	25	120.4	59.5	242.7	10	51.1	26.4	98.0
2001	41	11.3	6.7	18.7	18	44.3	22.7	85.7	10	18.3	8.6	37.7
2002	35	1.6	0.9	2.4	17	2.2	1.0	3.9	8	2.0	0.8	4.0
2003	45	3.6	2.4	5.2	25	3.9	2.2	6.5	10	4.5	2.3	8.1
2004	50	0.4	0.1	0.7	30	0.4	0.0	0.9	10	0.2	0.1	0.3
2005	45	2.4	1.5	3.8	20	3.0	1.3	6.0	10	4.8	1.5	12.5
2006	46	0.7	0.3	1.3	23	1.1	0.3	2.5	12	3.0	0.8	7.6

+ Used in comparison to the Hudson River YOY Striped Bass Abundance Index
* 200' seine hauls only, Little Neck and Manhasset Bays
** if LCI < 0 then LCI was set to 0

TABLE 4

WLI YEARLING STRIPED BASS ABUNDANCE INDEX 1984 - 2006

YEAR	SEINES*	YRL GM	LCI	UCI
1984	99	0.96	0.59	1.40
1985	42	0.61	0.24	1.09
1986	80	0.30	0.15	0.47
1987	109	0.21	0.09	0.34
1988	83	0.81	0.45	1.27
1989	80	1.78	1.16	2.58
1990	92	0.37	0.21	0.55
1991	111	1.26	0.84	1.78
1992	91	1.34	0.90	1.89
1993	108	0.75	0.48	1.06
1994	96	1.43	0.89	2.13
1995	81	1.29	0.85	1.83
1996	79	1.54	0.96	2.30
1997	58	1.00	0.58	1.53
1998	54	2.10	1.27	3.23
1999	88	2.05	1.45	2.80
2000	102	1.56	0.99	2.30
2001	83	2.16	1.51	2.96
2002	96	2.53	1.86	3.37
2003	107	1.19	0.88	1.56
2004	99	2.41	1.76	3.20
2005	75	0.64	0.36	0.99
2006	85	2.02	1.39	2.80

* Seines hauled in Jamaica, Little Neck, and Manhasset Bays from May through August

TABLE 5 2006 WLI STRIPED BASS TOTAL LENGTH FREQUENCIES

TL (mm)	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL	%
0-49	0	0	1	13	0	0	14	0.9
50-99	17	6	1	86	13	0	123	8.2
100-149	81	123	27	80	8	2	321	21.4
150-199	29	104	28	59	5	0	225	15.0
200-249	1	31	44	80	1	6	163	10.9
250-299	4	21	33	22	1	9	90	6.0
300-349	10	24	85	5	1	2	127	8.5
350-399	6	21	52	17	0	1	97	6.5
400-449	4	35	68	27	2	2	138	9.2
450-499	6	26	46	32	7	11	128	8.5
500-549	1	9	7	22	5	1	45	3.0
550-599	1	5	1	4	0	0	11	0.7
600-649	1	2	3	4	1	1	12	0.8
650-699	1	0	1	0	1	0	3	0.2
700-749	0	0	0	0	0	0	0	0.0
750-799	1	0	0	0	0	0	1	0.1
800-849	0	1	0	0	0	0	1	0.1
850-899	0	1	0	0	0	0	1	0.1
900-949	0	0	0	0	0	0	0	0.0
950-999	0	0	0	0	0	0	0	0.0
>1000	0	0	0	0	0	0	0	0.0
YOY NO TL	0	0	0	14	0	0	14	
OLDER NO TL	0	2	0	0	1	0	3	
TOTAL	163	411	397	465	46	35	1517	
SEINES	32	30	31	32	30	30	185	

TL (mm)	HEM	JAM	LNB	MAN	OSB	TOTAL	%
0-49	0	0	14	0	0	14	0.9
50-99	0	21	101	1	0	123	8.2
100-149	0	140	177	4	0	321	21.4
150-199	4	66	139	16	0	225	15.0
200-249	11	22	114	16	0	163	10.9
250-299	10	10	51	18	1	90	6.0
300-349	13	7	79	27	1	127	8.5
350-399	16	4	41	33	3	97	6.5
400-449	10	10	51	47	20	138	9.2
450-499	2	10	34	60	22	128	8.5
500-549	2	4	10	11	18	45	3.0
550-599	0	1	2	4	4	11	0.7
600-649	0	2	2	4	4	12	0.8
650-699	0	1	1	1	0	3	0.2
700-749	0	0	0	0	0	0	0.0
750-799	0	1	0	0	0	1	0.1
800-849	1	0	0	0	0	1	0.1
850-899	1	0	0	0	0	1	0.1
900-949	0	0	0	0	0	0	0.0
950-999	0	0	0	0	0	0	0.0
>1000	0	0	0	0	0	0	0.0
YOY NO TL	0	0	14	0	0	14	
OLDER NO TL	0	1	1	0	1	3	
TOTAL	70	300	831	242	74	1517	
SEINES	27	59	35	34	30	185	

TABLE 6 WLI STRIPED BASS TOTAL LENGTH FREQUENCIES 1984 - 2006

NORTH SHORE BAYS

TL(mm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
0-49	0	0	0	0	5	16	7	0	44	47	0	0	41	0	59	141	16546	1555	19	146	7	65	14
50-99	10	13	0	7	177	37	11	66	155	258	43	30	185	36	297	568	1704	942	69	237	65	158	102
100-149	450	29	7	16	278	114	38	231	94	124	143	30	80	382	151	80	299	325	167	189	302	233	181
150-199	215	6	2	14	86	41	40	135	101	162	393	41	102	78	81	165	119	153	168	91	297	60	159
200-249	68	4	14	10	27	107	56	112	93	80	286	15	37	78	54	164	191	98	83	79	86	26	141
250-299	43	4	58	6	40	75	76	104	68	93	169	25	23	25	89	77	134	39	270	101	68	48	80
300-349	108	0	53	4	19	23	43	125	41	43	94	15	29	23	75	42	33	28	323	169	66	122	120
350-399	28	0	31	7	9	21	9	83	23	32	37	10	29	7	38	53	18	28	121	95	53	88	93
400-449	5	0	30	10	5	11	3	63	10	17	13	2	11	7	18	16	11	23	47	52	35	96	128
450-499	2	1	14	6	6	9	4	19	9	15	14	7	10	5	13	17	7	14	22	59	33	84	118
500-549	3	0	18	2	7	2	4	12	15	3	8	1	2	3	7	3	10	11	28	36	41	27	41
550-599	3	0	12	1	5	3	3	8	12	4	6	1	0	2	3	9	4	12	12	16	20	23	10
600-649	1	0	3	1	4	2	2	6	2	2	3	0	2	1	0	4	6	3	12	9	13	10	10
650-699	1	0	2	0	7	3	1	6	4	4	1	0	0	1	2	1	2	3	7	2	6	7	2
700-749	1	0	1	0	2	0	1	3	1	1	1	0	0	1	0	1	4	2	3	4	2	1	0
750-799	0	0	1	0	1	0	2	1	1	2	1	0	0	0	0	0	1	2	0	1	3	1	0
800-849	0	0	0	0	0	0	0	0	0	2	1	0	0	1	0	0	0	1	0	2	3	1	1
850-899	0	0	0	0	0	0	1	0	0	2	1	1	0	0	0	0	0	1	0	0	1	2	1
900-949	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	0
950-999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>1000	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
NO TL	285	0	3	0	1	0	3	3	11	3	3	0	1	4	65	1	78	0	18	6	2	25	16
TOTAL	1223	57	250	84	680	464	304	977	684	894	1217	179	552	655	952	1342	19167	3240	1369	1294	1105	1078	1217
SEINES	77	41	77	96	97	66	75	54	61	68	69	41	62	49	47	67	76	115	120	146	134	114	126

SOUTH SHORE BAYS

TL(mm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
0-49	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	18	128	146	0	3	0	0	0
50-99	29	3	1	7	20	28	0	15	9	3	0	2	2	5	9	66	339	307	26	96	33	9	21
100-149	52	13	9	14	196	177	13	360	153	28	29	125	91	10	114	204	265	53	201	85	280	38	140
150-199	35	103	9	21	172	415	12	140	98	13	31	80	437	15	121	37	177	54	189	52	158	49	66
200-249	33	21	16	10	72	93	10	96	36	25	4	15	241	14	98	23	236	49	104	83	34	11	22
250-299	13	4	30	12	4	56	19	33	27	31	8	9	274	61	53	32	148	46	38	52	40	8	10
300-349	7	0	16	4	1	27	8	5	19	14	4	6	133	38	16	30	45	15	10	127	24	9	7
350-399	9	1	4	0	3	8	9	4	15	2	3	2	31	6	8	30	13	9	1	134	10	1	4
400-449	1	1	2	8	1	1	3	3	4	0	3	0	4	1	12	9	1	15	3	29	7	1	10
450-499	2	0	1	3	0	2	0	2	0	2	0	1	1	5	8	13	0	12	2	10	1	3	10
500-549	0	0	1	3	1	0	0	1	0	2	1	0	0	1	5	8	0	7	0	7	0	2	4
550-599	1	0	0	2	0	0	0	0	0	0	0	1	0	0	2	1	1	8	1	3	2	1	1
600-649	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	1	0	0	0	2
650-699	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	1
700-749	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0
750-799	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
800-849	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
850-899	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
900-949	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
950-999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO TL	3	0	1	0	0	2	0	0	0	0	0	0	11	3	1	0	1	0	0	1	0	3	1
TOTAL	187	146	90	86	470	809	74	659	361	120	84	241	1225	160	447	471	1354	737	579	682	589	135	300
SEINES	120	53	70	93	98	81	55	63	47	52	64	28	35	42	45	52	78	74	61	64	59	60	59

TOTALS

TL(mm)	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
0-49	0	0	0	2	5	16	7	0	44	47	1	0	41	0	59	159	16674	1701	19	149	7	65	14
50-99	39	16	1	14	197	65	11	81	164	261	43	32	187	41	306	634	2043	1249	95	333	98	167	123
100-149	502	42	16	30	474	291	51	591	247	152	172	155	171	392	265	284	564	378	368	274	582	271	321
150-199	250	109	11	35	258	456	52	275	199	175	424	121	539	93	202	202	296	207	357	143	455	109	225
200-249	101	25	30	20	99	200	66	208	129	105	290	30	278	92	152	187	427	147	187	162	120	37	163
250-299	56	8	88	18	44	131	95	137	95	124	177	34	297	86	142	109	282	85	308	153	108	56	90
300-349	115	0	69	8	20	50	51	130	60	57	98	21	162	61	91	72	78	43	333	296	90	131	127
350-399	37	1	35	7	12	29	18	87	38	34	40	12	60	13	46	83	31	37	122	229	63	89	97
400-449	6	1	32	18	6	12	6	66	14	17	16	2	15	8	30	25	12	38	50	81	42	97	138
450-499	4	1	15	9	6	11	4	21	9	17	14	8	11	10	21	30	7	26	24	69	34	87	128
500-549	3	0	19	5	8	2	4	13	15	5	9	1	2	4	12	11	10	18	28	43	41	29	45
550-599	4	0	12	3	5	3	3	8	12	4	6	2	0	2	5	10	5	20	13	19	22	24	11
600-649	3	0	3	1	4	2	2	6	2	2	3	0	2	1	0	4	6	14	13	9	13	10	12
650-699	1	0	2	0	7	3	1	6	4	4	1	0	0	1	2	1	2	7	8	2	6	7	3
700-749	1	0	1	0	2	0	1	3	1	1	1	0	0	2	0	1	4	2	4	4	2	1	0
750-799	0	0	1	0	1	0	2	1	1	2	1	0	0	0	0	0	1	2	0	1	3	1	1
800-849	0	0	0	0	0	0	0	0	0	2	1	0	0	1	0	0	0	2	0	2	3	1	1
850-899	0	0	0	0	0	0	1	0	0	2	1	1	0	0	0	0	0	1	0	0	1	2	1
900-949	0	0	0	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	0
950-999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>1000	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
NO TL	288	0	4	0	1	2	3	3	11	3	3	0	12	7	66	1	79	0	19	7	2	28	17
TOTAL	1410	203	340	170	1150	1273	378	1636	1045	1014	1301	420	1777	815	1399	1813	20521	3977	1948	1976	1694	1213	1517
SEINES	197	94	147	189	195	147	130	117	108	120	133	69	97	91	92	119	154	189	181	210	193	174	185

TABLE 7 AGE AND TOTAL LENGTH FREQUENCIES OF WLI STRIPED BASS RELEASED WITH USFWS TAGS

AGE	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
0	0	1	0	0	0	0	0	0	0	0	0	2	0	12	5	3	0	7	8	0
1	0	216	415	54	253	257	120	499	84	483	126	231	323	816	258	403	238	265	74	326
2	11	96	362	252	437	208	343	432	104	396	106	243	213	156	139	680	615	230	361	221
3	52	15	43	44	165	58	52	149	27	46	15	43	65	19	41	71	137	129	75	326
4	14	17	4	32	34	22	10	22	9	3	10	16	24	8	19	27	31	37	48	36
5	6	14	8	8	5	12	6	11	1	1	0	2	5	6	18	12	4	11	13	8
6	0	4	0	7	2	2	3	5	1	1	1	2	1	2	4	8	6	1	3	3
7	0	4	4	6	3	1	1	3	0	0	2	1	0	1	2	1	1	3	3	0
8	0	2	1	2	3	1	3	2	0	0	0	0	0	1	2	2	2	4	2	1
9	0	0	1	2	3	0	0	0	0	0	0	0	0	0	1	0	0	2	0	2
10	0	0	0	0	1	1	1	0	0	0	0	0	0	0	1	0	0	0	1	0
11	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
12	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0
13	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO AGE	2	7	10	6	16	19	18	33	9	2	8	11	8	8	4	5	0	6	3	5
TOTAL	85	377	848	413	925	581	558	1156	236	932	268	551	639	1029	494	1212	1034	696	593	928

TL (mm)	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
100-149	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
150-199	0	130	278	32	154	124	104	262	69	253	26	90	118	178	92	186	71	159	39	0
200-249	0	107	264	81	223	153	148	297	41	234	70	122	180	421	142	180	157	119	36	0
250-299	0	51	180	127	161	102	139	233	43	205	74	139	109	280	76	297	141	106	52	125
300-349	13	23	51	65	154	67	74	198	29	136	59	88	70	78	33	303	268	84	123	163
350-399	14	16	29	24	99	46	35	81	18	59	11	45	81	29	35	110	185	60	87	90
400-449	37	10	13	15	72	30	21	24	15	24	8	29	24	12	35	47	68	42	95	126
450-499	13	8	16	14	23	18	15	21	10	14	8	21	30	6	23	23	68	34	86	96
500-549	5	10	4	19	13	17	7	16	4	3	4	11	11	10	16	28	42	41	28	138
550-599	3	4	5	19	8	14	3	10	3	1	2	5	10	4	15	13	17	22	24	126
600-649	0	4	1	5	6	2	2	3	1	2	1	0	4	6	13	13	8	13	10	41
650-699	0	9	3	3	7	4	4	4	0	0	1	1	1	2	7	8	2	6	7	9
700-749	0	2	0	4	3	2	1	1	1	0	2	0	1	3	2	4	4	2	1	9
750-799	0	2	0	2	0	1	1	3	0	0	0	0	0	0	2	0	1	2	1	2
800-849	0	0	2	0	0	0	2	2	0	0	1	0	0	0	2	0	2	3	1	0
850-899	0	0	0	1	1	0	2	1	1	0	0	0	0	0	1	0	0	1	2	1
900-949	0	1	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1	1	1
949-999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
>1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
NO TL	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
TOTAL	85	377	848	413	925	581	558	1156	236	932	268	551	639	1029	494	1212	1034	696	593	928

TABLE 8 WLI STRIPED BASS TAG RECAPTURE INFORMATION

RELEASE YEAR	YEARS AT LARGE 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	TOTAL % REC
1987	4.7	1.2	7.1	2.4	3.5						1.2					1.2			21.2
1988	3.2	3.7	2.1	1.6	0.5	0.5			0.3	0.3	0.3	0.3			0.3			0.3	13.3
1989	4.4	4.2	2.1	0.9	0.5		0.1	0.2	0.1	0.1									12.7
1990	6.3	6.5	2.2	1.5	0.2	0.5	0.7	0.2	0.2		0.2		0.2						18.9
1991	6.3	4.2	2.3	1.1	1.2	0.4	0.1		0.3		0.1								16.0
1992	4.0	5.5	1.9	0.9	1.0	0.9	0.2	0.2		0.2									14.6
1993	5.4	3.8	0.7	2.3	0.7	0.9				0.2									14.0
1994	2.6	2.3	1.4	0.5	0.1	0.4	0.2	0.2	0.2										7.9
1995	6.4	4.7	2.1	1.3															14.4
1996	2.6	3.1	0.8	0.5	0.2	0.2		0.1			0.1								7.6
1997	3.4	5.2	1.5	1.5	0.4	0.7	0.7	0.4	0.4										14.2
1998	2.9	3.4	1.1	0.7	0.4	0.5	0.2		0.4										9.6
1999	1.9	1.7	0.8	0.8		0.6		0.2											5.9
2000	1.8	2.1	1.0	0.3	0.3	0.2	0.1												5.8
2001	3.6	3.0	1.4	0.8	0.4														9.3
2002	2.1	1.8	1.0	0.4	0.2														5.5
2003	1.9	2.6	1.1	1.0															6.6
2004	2.2	2.3	1.7																6.2
2005	1.3	4.0																	5.4
2006	2.6																		2.6
AVG %	3.5	3.5	1.8	1.1	0.7	0.5	0.3	0.2	0.3	0.2	0.4	0.3	0.2		0.3	1.2		0.3	10.6

STATE	YEARS AT LARGE 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	TOTAL REC
NB		1		1															2
ME		12	6	4	2		1												25
NH		2	1								1								4
MA	3	29	12	13	4	5		3	1	1									71
RI	1	18	10	4	2	1	1	1					1						39
CT	4	25	10	2		3	1		1										46
NY	398	302	110	62	25	18	4	3	6	3	3				1			1	936
NJ	19	10	14	7	6	3	1	2			1					1			64
DE		3	1	1															5
MD	1	1	2	2	2	2	2		1										13
VA		1	3	1	2	2	1		1										11
NC				1															1
UNKNOWN		3	2	1	1	2	1		1			1							12
TOTAL REC	426	407	171	99	44	36	12	9	11	4	5	1	1	0	1	1	0	1	1229
%	34.7	33.1	13.9	8.1	3.6	2.9	1.0	0.7	0.9	0.3	0.4	0.1	0.1	0.0	0.1	0.1	0.0	0.1	

GEAR TYPE	YEARS AT LARGE 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	TOTAL REC
ANCHOR GILL	1	6	4	2	2				1										16
DRIFT GILL	1			1	2		2	1											7
HOOK & LINE	386	365	153	87	39	33	8	8	9	4	4		1		1	1		1	1100
TRAP	1	7	7	1		1													17
SEINE	33	16	3	1							1								54
TRAWL	1	8	1	3															13
OTHER	2	2	1	2			1												8
UNKNOWN	1	3	2	2	1	2	1		1			1							14
TOTAL REC	426	407	171	99	44	36	12	9	11	4	5	1	1	0	1	1	0	1	1229

TABLE 9

WLI TAGGED STRIPED BASS SURVIVAL AND REPORTING RATE MODEL STRUCTURE

Released as Age 1

Release Year	Age 1 Releases	Recovery Year 1	2	3
1	N_{11}	$r_{11}(1-S_{11})$	$r_{22}(1-S_{22})S_{11}$	$r_{.3}(1-S_{.3})S_{11}S_{22}$
2	N_{12}		$r_{12}(1-S_{12})$	$r_{23}(1-S_{23})S_{12}$
3	N_{13}			$r_{13}(1-S_{13})$

Released as Age 2

Release Year	Age 2 Releases	Recovery Year 1	2	3
1	N_{21}	$r_{21}(1-S_{21})$	$r_{.2}(1-S_{.2})S_{21}$	$r_{.3}(1-S_{.3})S_{21}S_{.2}$
2	N_{22}		$r_{22}(1-S_{22})$	$r_{.3}(1-S_{.3})S_{22}$
3	N_{23}			$r_{23}(1-S_{23})$

Release as Ages 3 & 4

Release Year	Age 3&4 Releases	Recovery Year 1	2	3
1	$N_{.1}$	$r_{.1}(1-S_{.1})$	$r_{.2}(1-S_{.2})S_{.1}$	$r_{.3}(1-S_{.3})S_{.1}S_{.2}$
2	$N_{.2}$		$r_{.2}(1-S_{.2})$	$r_{.3}(1-S_{.3})S_{.2}$
3	$N_{.3}$			$r_{.3}(1-_{S.3})$

N_{at} - number of releases by age and year

r_{at} - reporting rate by age and year

S_{at} - survival rate by age and year

TABLE 10 WLI TAGGED STRIPED BASS RELEASE - RECAPTURE MATRICES

Recoveries of Striped Bass released at Age 1

Rel Yr	N_{1i}	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
1988	163	4	3	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1989	360		4	12	2	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0
1990	29			2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1991	250				7	7	8	4	1	1	0	0	1	0	0	0	0	0	0	0
1992	205					2	5	2	0	2	0	0	0	0	0	0	0	0	0	0
1993	120						4	2	0	0	0	0	0	0	0	0	0	0	0	0
1994	494							9	2	1	0	1	0	0	0	0	0	0	0	0
1995	84								1	4	1	0	0	0	0	0	0	0	0	0
1996	381									5	3	2	1	1	0	0	0	0	0	0
1997	42										3	1	0	0	0	0	0	1	0	0
1998	166											3	1	2	0	0	0	0	0	0
1999	320												4	5	2	3	0	2	1	0
2000	705													14	10	4	1	1	2	1
2001	235														1	2	4	0	0	0
2002	333															6	4	1	0	0
2003	172																3	2	3	0
2004	236																	2	4	1
2005	41																		0	0
2006	304																			5

Recoveries of Striped Bass released at Age 2

Rel Yr	N_{2i}	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
1988	89	4	5	3	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0
1989	327		23	13	4	2	2	0	0	1	0	1	0	0	0	0	0	0	0	0
1990	244			13	12	7	1	0	1	0	1	1	0	0	0	0	0	0	0	0
1991	434				34	15	11	5	6	1	1	0	1	0	0	0	0	0	0	0
1992	196					13	8	5	2	1	1	0	1	0	0	0	0	0	0	0
1993	343						26	10	3	9	3	3	0	0	0	0	0	0	0	0
1994	431							11	16	6	5	1	3	0	2	1	0	0	0	0
1995	104								9	4	2	2	0	0	0	0	0	0	0	0
1996	360									12	14	3	2	0	1	0	1	0	0	1
1997	85										6	2	1	1	1	1	1	0	0	0
1998	224											9	3	1	3	1	1	1	0	2
1999	213												6	3	1	2	1	1	0	0
2000	151													9	4	3	2	2	1	0
2001	119														9	5	1	2	2	1
2002	663															15	12	4	4	0
2003	455																10	12	5	5
2004	222																	7	5	0
2005	233																		5	5
2006	214																			7

Recoveries of Striped Bass released at Ages 3 and 4

Rel Yr	$N_{\_i}$	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
1988	29	2	2	1	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
1989	45		6	6	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1990	74			8	6	2	1	1	2	1	0	0	0	0	0	0	0	0	0	0
1991	199				21	6	2	2	1	2	0	0	1	0	0	0	0	0	0	0
1992	68					4	9	1	2	1	4	1	0	0	0	0	0	0	0	0
1993	62						4	2	0	0	1	1	0	0	0	1	0	0	0	0
1994	170							8	5	5	1	0	1	0	0	1	0	0	0	0
1995	36								5	1	1	1	0	0	0	0	0	0	0	0
1996	42									2	3	1	2	0	0	0	0	0	0	0
1997	20										1	0	0	0	0	1	0	0	0	0
1998	45											7	3	0	1	0	0	0	0	0
1999	85												1	3	1	0	0	0	0	0
2000	25													1	2	0	0	0	0	0
2001	57														6	4	0	0	0	0
2002	87															2	5	2	0	1
2003	137																4	4	0	0
2004	119																	3	1	3
2005	88																		4	7
2006	340																			17

Release and recovery years run from 5/1 through the following 4/30. Only releases of age one through four fish used.
Only May through August releases used to approximate a batch release.
The 1988 through 2006 tag releases were used, 1987 releases were not used because fish< 300 mm TL were not tagged.
Recaptures which occurred up to 7 days after release were not included, releases adjusted accordingly

TABLE 11 WLI AGE-STRUCTURED MODEL RESULTS

Model	AICc	Delta AICc	AICc Weight	Model Likelihood	Parameters	Deviance
{S(a)r(a*p)}	9334.23	0.00	0.87	1.00	15	457.98
{S(a)r(a*d)}	9339.96	5.73	0.05	0.06	18	457.70
{S(a)r(a*v)}	9339.96	5.73	0.05	0.06	18	457.70
{S(a*p)r(a*p)}	9340.76	6.53	0.03	0.04	24	446.45
{S(a*d)r(a*d)}	9346.67	12.44	0.00	0.00	27	446.33
{S(a*v)r(a*v)}	9351.30	17.07	0.00	0.00	30	444.93
{S(a)r(a*t)}	9352.93	18.70	0.00	0.00	60	386.09
{S(a*t)r(a*t)}	9366.10	31.87	0.00	0.00	110	297.74
{S(a*v)r(a)}	9375.34	41.11	0.00	0.00	18	493.08
{S(a*p)r(a)}	9381.83	47.60	0.00	0.00	15	505.58
{S(a*d)r(a)}	9384.60	50.37	0.00	0.00	18	502.34
{S(a*t)r(a)}	9390.10	55.87	0.00	0.00	60	423.26
{S(a)r(a)}	9394.35	60.12	0.00	0.00	6	536.14
{S(p)r(a*p)}	9419.97	85.74	0.00	0.00	16	541.71
{S(d)r(a*d)}	9424.91	90.68	0.00	0.00	19	540.64
{S(v)r(a*v)}	9427.70	93.47	0.00	0.00	20	541.42
{S(t)r(a*t)}	9437.98	103.75	0.00	0.00	75	440.78
{S(.)r(a*t)}	9446.75	112.52	0.00	0.00	58	483.94
{S(a*t)r(t)}	9479.62	145.39	0.00	0.00	75	482.41
{S(.)r(a)}	9487.06	152.83	0.00	0.00	4	632.85
{S(t)r(t)}	9500.75	166.52	0.00	0.00	37	580.30
{S(.)r(t)}	9509.70	175.47	0.00	0.00	20	623.42
{S(a*p)r(p)}	9528.279	194.05	0	0	16	650.028
{S(a*d)r(d)}	9529.539	195.31	0	0	19	645.269
{S(a*v)r(v)}	9533.157	198.93	0	0	20	646.88
{S(t)r(.)}	9586.067	251.84	0	0	20	699.79
{S(a)r(.)}	9593.251	259.02	0	0	4	739.044
{S(.)r(.}	9596.335	262.11	0	0	2	746.13
{S(a*t)r(.)}	9616.557	282.33	0	0	58	653.753

a - age effects separating ages 1, 2, and 3+
t - time effects
p - regulatory period grouping years 88-89, 90-94, 95-99, 00-06
v - regulatory period grouping years 88-89, 90-94, 95-99, 00-04, 05-06
d - regulatory period grouping years 88-89, 90-94, 95-99, 00-05, 06
. - no age, time, or regulatory period effects

TABLE 12 SURVIVAL ESTIMATES, WITH LIVE-RELEASE BIAS ADJUSTMENTS, FROM AGE-STRUCTURED MODELS USING 2006 WLI TAG RECAPTURES

Model	AIC Weight	Definitions
{S(a)r(a*p)}	0.87	a - age effects separating ages 1, 2, and 3+
{S(a)r(a*d)}	0.05	t - time effects
{S(a)r(a*v)}	0.05	p - regulatory period grouping years 88-89, 90-94, 95-99, 00-06
{S(a*p)r(a*p)}	0.03	v - regulatory period grouping years 88-89, 90-94, 95-99, 00-04, 05-06
		d - regulatory period grouping years 88-89, 90-94, 95-99, 00-05, 06

Age 1 Survival

Year	S(unadj.)	Z(unadj.)	Recovery	Released	bias	S(adj.)	Z(adj.)	LCLM (Z)	UCLM (Z)
1988	0.308	-1.18	0.02	1.00	-0.05	0.325	-1.12	-1.33	-0.94
1989	0.308	-1.18	0.01	1.00	-0.02	0.315	-1.15	-1.36	-0.97
1990	0.306	-1.18	0.07	1.00	-0.15	0.360	-1.02	-1.22	-0.84
1991	0.306	-1.18	0.03	0.83	-0.05	0.322	-1.13	-1.33	-0.95
1992	0.306	-1.18	0.01	1.00	-0.02	0.312	-1.16	-1.36	-0.98
1993	0.306	-1.18	0.03	1.00	-0.07	0.330	-1.11	-1.31	-0.93
1994	0.306	-1.18	0.02	0.88	-0.03	0.317	-1.15	-1.35	-0.97
1995	0.309	-1.18	0.01	1.00	-0.03	0.317	-1.15	-1.35	-0.96
1996	0.309	-1.18	0.01	1.00	-0.03	0.317	-1.15	-1.35	-0.96
1997	0.309	-1.18	0.07	1.00	-0.15	0.365	-1.01	-1.21	-0.82
1998	0.309	-1.18	0.02	1.00	-0.04	0.321	-1.14	-1.34	-0.95
1999	0.309	-1.18	0.01	1.00	-0.03	0.317	-1.15	-1.35	-0.96
2000	0.308	-1.18	0.02	1.00	-0.04	0.321	-1.14	-1.33	-0.95
2001	0.308	-1.18	0.00	1.00	-0.01	0.310	-1.17	-1.37	-0.99
2002	0.308	-1.18	0.02	1.00	-0.04	0.320	-1.14	-1.34	-0.96
2003	0.308	-1.18	0.02	1.00	-0.04	0.320	-1.14	-1.34	-0.96
2004	0.308	-1.18	0.01	1.00	-0.02	0.313	-1.16	-1.36	-0.98
2005	0.308	-1.18	0.00	1.00	0.00	0.308	-1.18	-1.38	-1.00
2006	0.308	-1.18	0.02	1.00	-0.04	0.319	-1.14	-1.34	-0.96

Age 2 Survival

Year	S(unadj.)	Z(unadj.)	Recovery	Released	bias	S(adj.)	Z(adj.)	LCLM (Z)	UCLM (Z)
1988	0.419	-0.87	0.04	1.00	-0.10	0.464	-0.77	-0.94	-0.61
1989	0.419	-0.87	0.07	0.95	-0.14	0.488	-0.72	-0.89	-0.56
1990	0.422	-0.86	0.07	1.00	-0.15	0.495	-0.70	-0.87	-0.55
1991	0.422	-0.86	0.08	1.00	-0.17	0.508	-0.68	-0.85	-0.52
1992	0.422	-0.86	0.06	1.00	-0.13	0.484	-0.72	-0.90	-0.57
1993	0.422	-0.86	0.08	1.00	-0.17	0.507	-0.68	-0.85	-0.53
1994	0.422	-0.86	0.03	0.80	-0.05	0.444	-0.81	-0.98	-0.66
1995	0.417	-0.87	0.09	1.00	-0.19	0.513	-0.67	-0.85	-0.51
1996	0.417	-0.87	0.04	1.00	-0.08	0.455	-0.79	-0.97	-0.63
1997	0.417	-0.87	0.07	1.00	-0.15	0.491	-0.71	-0.89	-0.55
1998	0.417	-0.87	0.04	1.00	-0.09	0.458	-0.78	-0.96	-0.62
1999	0.417	-0.87	0.03	1.00	-0.06	0.443	-0.81	-0.99	-0.65
2000	0.421	-0.87	0.06	1.00	-0.12	0.480	-0.73	-0.91	-0.58
2001	0.421	-0.87	0.08	1.00	-0.18	0.512	-0.67	-0.84	-0.52
2002	0.421	-0.87	0.02	1.00	-0.05	0.442	-0.82	-0.99	-0.66
2003	0.421	-0.87	0.03	1.00	-0.06	0.447	-0.81	-0.98	-0.65
2004	0.421	-0.87	0.03	1.00	-0.06	0.449	-0.80	-0.97	-0.65
2005	0.421	-0.87	0.03	1.00	-0.06	0.446	-0.81	-0.98	-0.66
2006	0.421	-0.87	0.03	1.00	-0.07	0.453	-0.79	-0.96	-0.64

Age 3+ Survival

Year	S(unadj.)	Z(unadj.)	Recovery	Released	bias	S(adj.)	Z(adj.)	LCLM (Z)	UCLM (Z)
1988	0.623	-0.47	0.07	1.00	-0.15	0.733	-0.31	-0.40	-0.24
1989	0.623	-0.47	0.14	1.00	-0.32	0.913	-0.09	-0.18	-0.02
1990	0.613	-0.49	0.14	0.88	-0.28	0.846	-0.17	-0.22	-0.12
1991	0.613	-0.49	0.09	0.86	-0.17	0.738	-0.30	-0.36	-0.25
1992	0.613	-0.49	0.11	1.00	-0.25	0.815	-0.20	-0.26	-0.15
1993	0.613	-0.49	0.08	1.00	-0.17	0.738	-0.30	-0.36	-0.25
1994	0.613	-0.49	0.04	1.00	-0.09	0.675	-0.39	-0.45	-0.34
1995	0.613	-0.49	0.08	1.00	-0.18	0.751	-0.29	-0.34	-0.24
1996	0.613	-0.49	0.08	1.00	-0.18	0.746	-0.29	-0.35	-0.24
1997	0.613	-0.49	0.05	1.00	-0.12	0.694	-0.37	-0.42	-0.32
1998	0.613	-0.49	0.09	0.80	-0.16	0.728	-0.32	-0.37	-0.27
1999	0.613	-0.49	0.04	1.00	-0.09	0.673	-0.40	-0.45	-0.35
2000	0.614	-0.49	0.03	1.00	-0.07	0.663	-0.41	-0.46	-0.36
2001	0.614	-0.49	0.07	1.00	-0.15	0.725	-0.32	-0.38	-0.27
2002	0.614	-0.49	0.05	1.00	-0.11	0.687	-0.38	-0.43	-0.33
2003	0.614	-0.49	0.03	1.00	-0.06	0.656	-0.42	-0.48	-0.37
2004	0.614	-0.49	0.03	1.00	-0.07	0.660	-0.42	-0.47	-0.37
2005	0.614	-0.49	0.07	1.00	-0.15	0.724	-0.32	-0.38	-0.27
2006	0.614	-0.49	0.05	0.92	-0.10	0.685	-0.38	-0.43	-0.33

Reporting Rate Used = 0.433 ; Bootstrap GOF S(a*t) r(a*t) prob = 0.23 ; chat - model pearson chisq/mean simulation pearson chisq = 461.28078 / 477.31885 = 0.966, no chat adjustment was used.

Models and AICc weights used to derive model-averaged parameter estimates given by Program MARK. Unused models had delta AIC < 7 and AICc weight < 0.01.Averaged parameter estimates adjusted for live release bias [S(adj.)]

* Survival estimates of most recent year (2006) may be exaggerated, as a result of the inability of time-dependant models to produce a survival rate for the last year

TABLE 13 DISTRIBUTION OF TAGGED WLI STRIPED BASS BY MONTH

Tagged at Age 1

YEAR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
1988		4	66	94	49	1	214
1989	7	52	151	151	53	1	415
1990		4	22	3	5		34
1991	10	36	149	55	3		253
1992	6	88	59	52	31	21	257
1993		60	43	17			120
1994		81	292	122	2	2	499
1995		49	19	16			84
1996	3	95	175	108	100	2	483
1997		11	9	22	79	5	126
1998		26	21	119	17	48	231
1999	3	5	169	144		2	323
2000	33	69	365	238	54	57	816
2001	1	37	107	90	22	1	258
2002	27	86	80	140	63	7	403
2003		16	59	97	64	2	238
2004	26	53	74	83	24	5	265
2005		1	15	25	15	18	74
2006	8	76	69	151	5	17	326

Tagged at Age 2

YEAR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
1988	22	52	6	9	3	2	94
1989	41	199	64	23	29	5	361
1990	13	45	174	12	5	2	251
1991	186	135	90	24	2		437
1992	5	125	13	53	5	7	208
1993	10	190	135	8			343
1994	3	353	54	21		1	432
1995	7	81	6	10			104
1996	64	101	47	149	31	4	396
1997		36	31	18	19	2	106
1998	1	103	77	43	1	18	243
1999	32	20	153	8			213
2000	10	61	27	53	1	4	156
2001	6	44	31	38	15	4	138
2002	9	566	19	69	1	16	680
2003	1	126	260	68	142	18	615
2004	24	91	81	26	4	4	230
2005	3	18	118	94	11	117	361
2006	14	43	133	24	3	4	221

Tagged at Age 3&4

YEAR	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL
1988	17	12			1	1	31
1989	10	25	6	4	2		47
1990	9	46	19			2	76
1991	55	95	44	5			199
1992	2	50	2	14	7	5	80
1993	9	33	19	1			62
1994	3	149	16	2		1	171
1995	5	30		1			36
1996	4	28	8	2	7		49
1997		8	8	4	5		25
1998		38	5	2	2	12	59
1999	5	7	67	6		4	89
2000	1	7	5	12		2	27
2001	2	34	6	15	3		60
2002	6	62	6	13		11	98
2003	3	27	89	18	11	20	168
2004	7	33	51	28	37	10	166
2005	20	19	34	15	6	29	123
2006	18	98	148	76	10	12	362

Indicates the peak of those tagged in an age group

TABLE 14 SURVIVAL ESTIMATES, WITH LIVE-RELEASE BIAS ADJUSTMENTS, FROM AGE-STRUCTURED MODELS USING JUNE - JULY WLI TAG RECAPTURES

Model	AIC Weight	Definitions
{S(a)r(a*p)}	0.66	a - age effects separating ages 1, 2, and 3+
{S(a*p)r(a*p)}	0.15	t - time effects
{S(a)r(a*d)}	0.13	p - regulatory period grouping years 88-89, 90-94, 95-99, 00-06
{S(a)r(a*v)}	0.04	v - regulatory period grouping years 88-89, 90-94, 95-99, 00-04, 05-06
{S(a*d)r(a*d)}	0.02	d - regulatory period grouping years 88-89, 90-94, 95-99, 00-05, 06

Age 1 Survival

Year	S(unadj.)	Z(unadj.)	Recovery	Released	bias	S(adj.)	Z(adj.)	LCLM (Z)	UCLM (Z)
1988	0.256	-1.36	0.03	1.00	-0.06	0.273	-1.30	-1.32	-0.93
1989	0.256	-1.36	0.01	1.00	-0.02	0.262	-1.34	-1.36	-0.97
1990	0.269	-1.31	0.04	1.00	-0.08	0.293	-1.23	-1.30	-0.91
1991	0.269	-1.31	0.02	0.67	-0.03	0.277	-1.28	-1.35	-0.97
1992	0.269	-1.31	0.01	1.00	-0.03	0.277	-1.28	-1.36	-0.97
1993	0.269	-1.31	0.03	1.00	-0.06	0.287	-1.25	-1.32	-0.94
1994	0.269	-1.31	0.01	1.00	-0.01	0.272	-1.30	-1.37	-0.99
1995	0.281	-1.27	0.01	1.00	-0.03	0.290	-1.24	-1.35	-0.96
1996	0.281	-1.27	0.01	1.00	-0.02	0.285	-1.25	-1.36	-0.97
1997	0.281	-1.27	0.05	1.00	-0.11	0.315	-1.16	-1.26	-0.88
1998	0.281	-1.27	0.02	1.00	-0.05	0.294	-1.22	-1.33	-0.94
1999	0.281	-1.27	0.02	1.00	-0.04	0.292	-1.23	-1.34	-0.95
2000	0.272	-1.30	0.02	1.00	-0.03	0.281	-1.27	-1.34	-0.96
2001	0.272	-1.30	0.00	1.00	0.00	0.272	-1.30	-1.38	-1.00
2002	0.272	-1.30	0.01	1.00	-0.03	0.279	-1.28	-1.35	-0.97
2003	0.272	-1.30	0.00	1.00	0.00	0.272	-1.30	-1.38	-1.00
2004	0.272	-1.30	0.01	1.00	-0.02	0.276	-1.29	-1.36	-0.98
2005	0.272	-1.30	0.00	1.00	0.00	0.272	-1.30	-1.38	-1.00
2006	0.285	-1.25	0.01	1.00	-0.03	0.294	-1.22	-1.35	-0.97

Age 2 Survival

Year	S(unadj.)	Z(unadj.)	Recovery	Released	bias	S(adj.)	Z(adj.)	LCLM (Z)	UCLM (Z)
1988	0.386	-0.95	0.05	1.00	-0.11	0.434	-0.83	-0.92	-0.60
1989	0.386	-0.95	0.06	0.93	-0.11	0.435	-0.83	-0.92	-0.60
1990	0.412	-0.89	0.06	1.00	-0.14	0.477	-0.74	-0.89	-0.56
1991	0.412	-0.89	0.09	1.00	-0.19	0.511	-0.67	-0.82	-0.50
1992	0.412	-0.89	0.07	1.00	-0.15	0.482	-0.73	-0.88	-0.55
1993	0.412	-0.89	0.07	1.00	-0.15	0.486	-0.72	-0.87	-0.55
1994	0.412	-0.89	0.03	0.78	-0.04	0.431	-0.84	-0.99	-0.66
1995	0.386	-0.95	0.10	1.00	-0.22	0.494	-0.71	-0.81	-0.47
1996	0.386	-0.95	0.02	1.00	-0.03	0.399	-0.92	-1.02	-0.68
1997	0.386	-0.95	0.06	1.00	-0.13	0.443	-0.81	-0.92	-0.58
1998	0.386	-0.95	0.04	1.00	-0.09	0.424	-0.86	-0.96	-0.62
1999	0.386	-0.95	0.02	1.00	-0.05	0.405	-0.90	-1.00	-0.66
2000	0.399	-0.92	0.08	1.00	-0.18	0.487	-0.72	-0.84	-0.51
2001	0.399	-0.92	0.06	1.00	-0.12	0.455	-0.79	-0.91	-0.58
2002	0.399	-0.92	0.02	1.00	-0.05	0.420	-0.87	-0.99	-0.66
2003	0.399	-0.92	0.03	1.00	-0.06	0.423	-0.86	-0.98	-0.66
2004	0.399	-0.92	0.03	1.00	-0.07	0.428	-0.85	-0.97	-0.64
2005	0.399	-0.92	0.02	1.00	-0.04	0.417	-0.87	-0.99	-0.67
2006	0.412	-0.89	0.04	1.00	-0.09	0.451	-0.80	-0.95	-0.62

Age 3+ Survival

Year	S(unadj.)	Z(unadj.)	Recovery	Released	bias	S(adj.)	Z(adj.)	LCLM (Z)	UCLM (Z)
1988	0.670	-0.40	0.00	1.00	0.00	0.670	-0.40	-0.56	-0.40
1989	0.670	-0.40	0.13	1.00	-0.29	0.943	-0.06	-0.22	-0.06
1990	0.625	-0.47	0.14	0.86	-0.27	0.852	-0.16	-0.23	-0.13
1991	0.625	-0.47	0.08	0.83	-0.15	0.732	-0.31	-0.39	-0.28
1992	0.625	-0.47	0.11	1.00	-0.24	0.827	-0.19	-0.26	-0.16
1993	0.625	-0.47	0.09	1.00	-0.19	0.768	-0.26	-0.34	-0.23
1994	0.625	-0.47	0.05	1.00	-0.10	0.694	-0.37	-0.44	-0.34
1995	0.621	-0.48	0.09	1.00	-0.19	0.765	-0.27	-0.33	-0.23
1996	0.621	-0.48	0.10	1.00	-0.22	0.799	-0.22	-0.29	-0.19
1997	0.621	-0.48	0.06	1.00	-0.13	0.714	-0.34	-0.40	-0.30
1998	0.621	-0.48	0.08	0.80	-0.15	0.732	-0.31	-0.38	-0.27
1999	0.621	-0.48	0.04	1.00	-0.08	0.676	-0.39	-0.46	-0.35
2000	0.623	-0.47	0.02	1.00	-0.05	0.654	-0.42	-0.49	-0.39
2001	0.623	-0.47	0.06	1.00	-0.14	0.723	-0.32	-0.39	-0.29
2002	0.623	-0.47	0.05	1.00	-0.12	0.706	-0.35	-0.42	-0.31
2003	0.623	-0.47	0.03	1.00	-0.06	0.663	-0.41	-0.48	-0.38
2004	0.623	-0.47	0.03	1.00	-0.06	0.665	-0.41	-0.48	-0.37
2005	0.623	-0.47	0.08	1.00	-0.18	0.756	-0.28	-0.35	-0.24
2006	0.609	-0.50	0.07	0.92	-0.14	0.710	-0.34	-0.39	-0.28

Reporting Rate Used = 0.433 ; Bootstrap GOF S(a*t) r(a*t) prob = 0.44 ; chat - model pearson chisq/mean simulation pearson chisq = 469.07756 / 463.04912 = 1.01, no chat adjustment was used.

Models and AICc weights used to derive model-averaged parameter estimates given by Program MARK. Unused models had delta AIC < 7 and AICc weight < 0.01.Averaged parameter estimates adjusted for live release bias [S(adj.)]

* Survival estimates of most recent year (2006) may be exaggerated, as a result of the inability of time-dependant models to produce a survival rate for the last year

TABLE 15

2006 WLI SPECIES CATCH BY BAY

SPECIES	HEM	JAM	LNB	MAN	OSB	TOTAL	C/E
DIADROMOUS							
ALEWIFE	1	0	16	3	0	20	0.1
AMERICAN EEL	0	1	0	0	0	1	0.0
ATLANTIC TOMCOD	31	0	24	0	31	86	0.5
BLUEBACK HERRING	0	2	0	1	0	3	0.0
STRIPED BASS (YOY)	0	1	210	2	0	213	1.2
STRIPED BASS (OLDER)	70	299	621	240	74	1304	7.0
MARINE							
ATLANTIC HERRING	0	7	11	0	3	21	0.1
ATLANTIC MENHADEN (YOY)	49	218	399	17	3622	4305	23.3
ATLANTIC MENHADEN (OLDER)	0	1	1	0	2	4	0.0
ATLANTIC NEEDLEFISH	0	47	0	0	0	47	0.3
BAY ANCHOVY	12	9514	247	123	433	10329	55.8
BLACK SEABASS	0	1	0	0	0	1	0.0
BLACKFISH / TAUTOG (YOY)	35	10	6	2	16	69	0.4
BLACKFISH / TAUTOG (OLDER)	20	16	9	1	11	57	0.3
BLUEFISH (YOY)	1465	918	223	508	1265	4379	23.7
BLUEFISH (OLDER)	1	0	2	0	1	4	0.0
BUTTERFISH	0	1	0	0	0	1	0.0
CREVALLE JACK	0	14	0	1	0	15	0.1
CUNNER	7	0	1	0	6	14	0.1
FOURSPOT FLOUNDER	0	1	0	0	0	1	0.0
GRUBBY SCULPIN	10	19	0	0	17	46	0.2
HALFBEAK (SILVERSTRIPE)	0	1	0	0	0	1	0.0
INSHORE LIZARDFISH	0	174	1	0	3	178	1.0
LINED SEAHORSE	0	10	1	0	0	11	0.1
NAKED GOBY	0	1	0	0	11	12	0.1
NORTHERN KINGFISH	0	49	26	1	0	76	0.4
NORTHERN PIPEFISH	62	36	13	0	55	166	0.9
NORTHERN PUFFER	0	9	5	0	0	14	0.1
NORTHERN SENNET	0	4	0	0	0	4	0.0
NORTHERN STARGAZER	0	3	0	0	0	3	0.0
OYSTER TOADFISH	0	1	0	0	2	3	0.0
POLLOCK	0	0	1	0	0	1	0.0
ROCK GUNNEL	2	0	0	0	0	2	0.0
SAND LANCE SP.	7	0	0	0	0	7	0.0
SCUP	31	2	4	0	212	249	1.3
SEABOARD GOBY	0	0	0	0	2	2	0.0
SILVERSIDE SP.	4192	8810	8581	5795	6785	34163	184.7
SMALLMOUTH FLOUNDER	4	27	2	0	1	34	0.2
SPOT	0	39	8	0	0	47	0.3
SPOTTED HAKE	3	2	3	0	0	8	0.0
STRIPED MULLET	2	148	0	0	0	150	0.8
STRIPED SEAROBIN	1	130	0	0	0	131	0.7
SUMMER FLOUNDER	2	12	2	0	0	16	0.1
WAHOO	0	5	0	0	0	5	0.0
WEAKFISH	0	0	0	0	1	1	0.0
WHITE MULLET	1	71	41	0	0	113	0.6
WINDOWPANE FLOUNDER	1	19	0	0	0	20	0.1
WINTER FLOUNDER (YOY)	27	2189	37	43	375	2671	14.4
WINTER FLOUNDER (OLDER)	2	2	7	1	9	21	0.1
ESTUARINE							
FOURSPINE STICKLEBACK	0	2	0	1	0	3	0.0
KILLIFISH SP.	657	3792	295	7569	2892	15205	82.2
SHEEPSHEAD MINNOW	0	0	0	1	2	3	0.0
WHITE PERCH (YOY)	0	35	0	0	0	35	0.2
WHITE PERCH (OLDER)	3	0	2	0	55	60	0.3
FRESHWATER							
GIZZARD SHAD	0	0	0	1	0	1	0.0
TOTAL FINFISH	6698	26643	10799	14310	15886	74336	401.8
# SEINES	27	59	35	34	30	185	
# DIADROMOUS	3	3	3	3	2	5	
# MARINE	19	33	20	8	17	39	
# ESTUARINE	2	3	2	3	3	4	
# FRESH WATER	0	0	0	1	0	1	
TOTAL FINFISH SPECIES	24	39	25	15	22	49	
INVERTEBRATES							
BLUE CRAB (YOY)	0	441	27	28	1	497	2.7
BLUE CRAB (OLDER)	3	594	40	26	3	666	3.6
CALICO (LADY) CRAB	31	319	17	2	15	384	2.1
GREEN CRAB	61	14	8	15	86	184	1.0
HORSESHOE CRAB	31	31	48	39	11	160	0.9
JAPANESE SHORE CRAB	22	0	8	6	3	39	0.2
MUD CRAB	64	31	2	8	193	298	1.6
ROCK CRAB	1	0	0	0	4	5	0.0
SPIDER CRAB	3	0	8	0	33	44	0.2
LONG-FINNED SQUID	0	0	0	0	4	4	0.0
MOON SNAIL	0	1	0	0	0	1	0.0
OYSTER	0	0	2	0	0	2	0.0
STARFISH	8	0	0	0	0	8	0.0432
CHANNELED WHELK	0	1	0	0	3	4	0.0
REPTILES							
DIAMONDBACK TERRAPIN	1	3	0	0	1	5	0.027

TABLE 16 2006 WLI SPECIES CATCH BY MONTH

SPECIES	MAY	JUNE	JULY	AUG	SEPT	OCT	TOTAL	C/E
DIADROMOUS								
ALEWIFE	0	0	0	0	4	16	20	0.1
AMERICAN EEL	0	0	0	0	1	0	1	0.0
ATLANTIC TOMCOD	78	8	0	0	0	0	86	0.5
BLUEBACK HERRING	0	0	2	1	0	0	3	0.0
STRIPED BASS (YOY)	0	0	2	189	20	2	213	1.2
STRIPED BASS (OLDER)	163	411	395	276	26	33	1304	7.0
MARINE								
ATLANTIC HERRING	17	4	0	0	0	0	21	0.1
ATLANTIC MENHADEN (YOY)	0	29	4048	120	107	1	4305	23.3
ATLANTIC MENHADEN (OLDER)	0	0	1	3	0	0	4	0.0
ATLANTIC NEEDLEFISH	0	0	0	2	18	27	47	0.3
BAY ANCHOVY	339	243	4	9348	283	112	10329	55.8
BLACK SEABASS	0	0	0	0	0	1	1	0.0
BLACKFISH / TAUTOG (YOY)	0	0	40	20	6	3	69	0.4
BLACKFISH / TAUTOG (OLDER)	19	3	3	20	10	2	57	0.3
BLUEFISH (YOY)	0	471	1180	2137	435	156	4379	23.7
BLUEFISH (OLDER)	0	0	3	0	1	0	4	0.0
BUTTERFISH	0	1	0	0	0	0	1	0.0
CREVALLE JACK	0	0	3	1	9	2	15	0.1
CUNNER	1	0	5	7	1	0	14	0.1
FOURSPOT FLOUNDER	0	0	1	0	0	0	1	0.0
GRUBBY SCULPIN	27	18	1	0	0	0	46	0.2
HALFBEAK (SILVERSTRIPE)	0	0	0	1	0	0	1	0.0
INSHORE LIZARDFISH	0	0	35	92	46	5	178	1.0
LINED SEAHORSE	6	1	0	0	2	2	11	0.1
NAKED GOBY	3	2	0	2	5	0	12	0.1
NORTHERN KINGFISH	0	0	8	41	24	3	76	0.4
NORTHERN PIPEFISH	78	15	12	33	24	4	166	0.9
NORTHERN PUFFER	0	2	2	6	3	1	14	0.1
NORTHERN SENNET	0	0	4	0	0	0	4	0.0
NORTHERN STARGAZER	0	0	1	1	1	0	3	0.0
OYSTER TOADFISH	0	1	0	1	1	0	3	0.0
POLLOCK	1	0	0	0	0	0	1	0.0
ROCK GUNNEL	2	0	0	0	0	0	2	0.0
SAND LANCE SP.	1	6	0	0	0	0	7	0.0
SCUP	0	0	70	124	55	0	249	1.3
SEABOARD GOBY	0	1	1	0	0	0	2	0.0
SILVERSIDE SP.	4695	1346	6204	10878	7242	3798	34163	184.7
SMALLMOUTH FLOUNDER	4	1	1	8	7	13	34	0.2
SPOT	0	4	33	10	0	0	47	0.3
SPOTTED HAKE	8	0	0	0	0	0	8	0.0
STRIPED MULLET	0	0	0	2	74	74	150	0.8
STRIPED SEAROBIN	2	0	84	32	3	10	131	0.7
SUMMER FLOUNDER	0	4	4	7	1	0	16	0.1
WAHOO	0	0	0	5	0	0	5	0.0
WEAKFISH	0	0	0	1	0	0	1	0.0
WHITE MULLET	3	6	0	37	62	5	113	0.6
WINDOWPANE FLOUNDER	13	6	0	0	1	0	20	0.1
WINTER FLOUNDER (YOY)	172	2105	247	107	37	3	2671	14.4
WINTER FLOUNDER (OLDER)	16	2	2	0	1	0	21	0.1
ESTUARINE								
FOURSPINE STICKLEBACK	2	1	0	0	0	0	3	0.0
KILLIFISH SP.	331	176	991	8582	3602	1523	15205	82.2
SHEEPSHEAD MINNOW	0	0	0	1	2	0	3	0.0
WHITE PERCH (YOY)	0	22	12	1	0	0	35	0.2
WHITE PERCH (OLDER)	0	0	0	5	55	0	60	0.3
FRESHWATER								
GIZZARD SHAD	0	0	0	1	0	0	1	0.0
TOTAL FINFISH	5981	4889	13399	32102	12169	5796	74336	401.8
# SEINES	32	30	31	32	30	30	185	
# DIADROMOUS	2	2	2	2	3	2	5	
# MARINE	18	21	22	26	24	18	39	
# ESTUARINE	2	3	2	3	3	1	4	
# FRESH WATER	0	0	0	1	0	0	1	
TOTAL FINFISH SPECIES	22	26	26	32	30	21	49	
INVERTEBRATES								
BLUE CRAB (YOY)	130	65	87	56	112	47	497	2.7
BLUE CRAB (OLDER)	1	39	347	206	68	5	666	3.6
CALICO (LADY) CRAB	14	49	221	69	27	4	384	2.1
GREEN CRAB	34	27	17	30	64	12	184	1.0
HORSESHOE CRAB	33	62	26	29	8	2	160	0.9
JAPANESE SHORE CRAB	20	3	5	4	5	2	39	0.2
MUD CRAB	111	23	6	154	4	0	298	1.6
ROCK CRAB	1	0	1	0	3	0	5	0.0
SPIDER CRAB	16	15	4	9	0	0	44	0.2
LONG-FINNED SQUID	0	0	0	4	0	0	4	0.0
MOON SNAIL	1	0	0	0	0	0	1	0.0
OYSTER	0	0	2	0	0	0	2	0.0
STARFISH	0	4	0	3	0	1	8	0.0432
CHANNELED WHELK	1	1	0	2	0	0	4	0.0
REPTILES								
DIAMONDBACK TERRAPIN	1	3	0	0	1	0	5	0.027

TABLE 17 WLI SPECIES CATCH COMPOSITION 1984 - 2006

SPECIES	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
DIADROMOUS																							
ALEWIFE	3	64	59	10	574	264	14	21	0	37	135	1	61	18	1	43	9	15	352	0	8	3	20
ALOSID SP.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
AMERICAN EEL	114	24	75	56	118	35	9	3	4	4	10	0	9	0	2	1	5	2	6	34	6	5	1
AMERICAN SHAD	59	1	12	7	26	13	82	18	3	10	5	0	9	0	0	1	0	21	0	0	0	0	0
ATLANTIC TOMCOD	641+	77	52	217	361	454	218	56	13	110	154	39	119	48	148	145	68	330	9	72	106	306	86
BLUEBACK HERRING	151	168	287	113	152	274	37	1936	38	0	0	0	50	5	4	0	0	3	2	243	17	135	3
HICKORY SHAD	1	0	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	1	0	3	5	1	0
RAINBOW SMELT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
STRIPED BASS (YOY)	1	0	0	19	184	54	32	206	264	303	64	24	242	286	407	825	19034	3061	131	666	69	414	213
STRIPED BASS (OLDER)	1409	203	340	151	964	1218	346	1430	781	709	1236	396	1532	529	992	988	1487	916	1817	1310	1625	799	1304
STRIPED BASS (HATCHERY)	0	0	0	0	2	1	0	0	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0
MARINE																							
ATLANTIC COD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0
ATLANTIC HERRING	1121	12	28139+	1059	1888	73	439	8	331	10340	189	63	7118	231	0	4874	58	5843	38	272	587	90	21
ATLANTIC MACKEREL	0	0	3	1	1	0	2	0	7	1	6	0	0	0	0	1	0	0	0	2	0	2	0
ATLANTIC MENHADEN	492	81+	1610+	214	39708	877	5693	8570	7097	719	16078	157	244	1028	687	123472	6802	5063	52687	136861	75005	73003	4309
ATLANTIC NEEDLEFISH	93	3	1	15	60	51	5	31	6	0	14	11	7	14	3	3	4	5	10	1	71	27	47
BANDED RUDDERFISH	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
BANDTAIL PUFFER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0
BAY ANCHOVY	8026+	247+	14948+	10026	15514	8872	22967	8607	4755	1048	758	152	1270	2192	2654	1327	11369	1734	13853	9971	3384	282	10329
BLACK SEABASS	1	0	0	0	0	0	0	0	0	0	6	1	0	0	0	0	0	3	43	6	49	1	1
BLACK DRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
BLACKFISH / TAUTOG	93	5	57	169	243	39	39	474	48	15	18	11	6	15	13	153	156	228	473	337	241	349	126
BLUEFISH	2070+	240+	3609	11792	914	2829	903	1145	963	400	352	279	275	1015	387	377	4169	5133	2459	915	1826	4066	4383
BLUESPOTTED CORNETFISH	0	0	0	0	0	2	0	0	0	0	0	0	0	1	3	0	0	3	5	0	0	0	0
BURRFISH SP.	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BUTTERFISH	2	0	0	6	0	1	0	0	0	0	2	0	0	0	3	0	0	1	2	0	1	4	1
COBIA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
COWFISH SP.	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CREVALLE JACK	56	34	10	32	161	6	17	6	3	13	17	4	2	3	50	15	17	24	63	15	9	93	15
CUNNER	79	1	3	5	49	1	3	0	1	5	2	0	0	3	0	3	36	116	94	128	112	133	14
DOCTORFISH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
FOURBEARD ROCKLING	0	0	0	0	15	0	5	4	0	21	0	0	0	0	4	0	0	1	0	0	0	0	0
FOUREYE BUTTERFLYFISH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
FOURSPOT FLOUNDER	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
GAG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1	0	0	0	0
GOATFISH	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GRAY SNAPPER	0	1	0	17	2	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0
GRUBBY SCULPIN	41	2	11	10	269	43	7	28	33	33	30	8	8	19	29	106	164	88	42	73	57	71	46
HALFBEAK	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1
HORSE-EYE JACK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0
HOUNDFISH	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
INSHORE LIZARDFISH	14	0	1	0	2	7	7	1	18	4	59	0	0	4	53	16	38	62	17	0	101	32	178
LINED SEAHORSE	77	20	34	10	73	16	18	18	2	1	2	1	1	1	2	5	2	7	7	5	0	1	11
LOOKDOWN	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MOTTLED MOJARRA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	108	2	0	0	0	0
NAKED GOBY	6	1	0	5	53	13	1	25	11	7	1	0	0	2	127	62	49	104	132	26	4	54	12
NORTHERN KINGFISH	168	2	77	42	88	1	30	106	36	10	84	34	5	84	740	62	11	164	236	137	271	243	76
NORTHERN PIPEFISH	573	142+	806	416	1154	404	141	417	163	163	365	131	73	84	181	268	243	786	180	158	85	136	166
NORTHERN PUFFER	83	9	70	54	46	16	11	206	27	66	73	26	29	16	113	110	40	163	122	138	165	269	14
NORTHERN SEAROBIN	96	35+	90	0	4	0	0	1	1	5	65	1	9	0	0	22	0	256	5	2	0	0	0
NORTHERN SENNET	2	0	3	10	2	0	0	0	2	0	4	0	0	0	0	0	0	0	77	0	0	51	4
NORTHERN STARGAZER	2	0	0	0	0	0	1	0	8	0	19	0	0	1	1	16	1	3	20	3	4	15	3
OYSTER TOADFISH	120	17	22	85	279	22	1	7	0	0	1	2	0	0	1	4	3	40	1	1	6	9	3
PERMIT	5	0	4	12	2	20	2	0	0	0	0	0	1	0	0	0	19	0	0	3	2	0	0
PINFISH	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	0	2	8	0	0	0	0
PLANEHEAD FILEFISH	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
POLLOCK	1585	3	3	2	144	2	2	2	4	0	26	0	0	0	0	43	2	0	0	524	0	181	1
RED HAKE	0	7	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0
ROCK GUNNEL	0	0	1	3	5	8	0	0	0	0	0	0	0	3	4	1	0	0	0	2	1	2	2
ROUND HERRING	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SAND LANCE sp.	3	185	0	179	148	3	325	148	617	0	10	3	5578	258	30	1105	21	130	830	14	0	34	7
SCAD	0	0	0	3	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SCORPIONFISH SP.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
SCUP	14	4	0	5	0	0	3	1	0	0	0	0	0	0	0	0	201	288	1407	2200	1703	2868	249
SEABOARD GOBY	0	0	0	0	0	0	0	0	0	0	0	0	3	6	0	0	0	10	52	27	2	0	2
SHORT BIGEYE	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	0
SILVER HAKE	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
SILVER PERCH	0	0	0	0	0	0	0	0	0	0	0	83	0	0	1	2	1	0	0	0	4	0	0
SILVERSIDE sp.	6733+	5336+	24340+	87485	196751	90472	58948	63399	72692	24758	58100	29764	37283	55948	56934	53348	64639	105512	99699	93227	248527	86736	34163
SMALLMOUTH FLOUNDER	50	4	0	3	24	6	5	29	32	8	11	1	61	3	22	7	124	75	9	16	61	12	34
SMOOTH DOGFISH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
SNAKEFISH	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SPANISH MACKEREL	0	0	0	0	0	0	61	0	0	0	26	0	0	0	3	0	0	0	0	4	0	0	0
SPOT	1	233	351	5	2	0	21	8	1	6	64	3	110	1	5	17	140	251	802	98	2	1	47
SPOTFIN BUTTERFLYFISH	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24	0	0	0	0
SPOTFIN MOJARRA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
SPOTTAIL FLOUNDER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
SPOTTED HAKE	3	0	3	0	3	0	0	6	0	3	2	1	7	0	10	17	23	6	15	4	0	0	8
STRIPED ANCHOVY	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	58	0	15	17	0	0
STRIPED BURRFISH	6	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	19	0	0	3	0	0
STRIPED MULLET	48	42	197	72	1	11	0	0	0	0	0	0	0	1	5	12	33	7	19	0	0	8	150
STRIPED SEAROBIN	2	0	0	0	3	7	2	55	14	0	27	3	4	55	1144	97	52	23	765	150	311	359	131
SUMMER FLOUNDER	115	9	50	20	10	34	12	75	19	52	54	17	8	6	10	15	30	13	21	17	25	20	16
TIGER GROUPER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
TRUNKFISH	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
WAHOO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
WEAKFISH	425	0	13	0	7	0	15	12	0	0	2	0	0	0	0	1	2	295	418	15	4	34	1
WHITE HAKE	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WHITE MULLET	204	14	625	117	238	229	5	139	16	204	9	0	111	102	24	210	203	44	33	185	11	161	113
WINDOWPANE	158	141	97	90	160	65	114	112	94	333	94	10	55	50	49	36	81	57	25	115	40	61	20
WINTER FLOUNDER	939	278	1121	1154	3466	606	1500	2632	3218	2347	2271	1633	1030	495	1614	2302	4785	3402	3272	8720	2819	2890	2692

TABLE 17 (cont.) WLI SPECIES CATCH COMPOSITION 1984 - 2006

SPECIES	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
ESTUARINE																							
FOURSPINE STICKLEBACK	457	87+	10	57	1211	2853	41	51	7	11	188	1	11	34	0	4	16	304	16	33	4	5	3
HOGCHOKER	12	37	1	4	182	133	122	124	21	20	233	32	15	41	0	0	0	1	0	0	0	0	0
KILLIFISH sp.	9856+	7882+	15143+	26837	39947	38460	14872	15641	24820	6013	6055	10193	4589	9166	5431	10102	13008	27221	17839	11408	18000	18438	15205
NINESPINE STICKLEBACK	0	4	0	0	4185	1055	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
RAINWATER KILLIFISH	109	1	4	11	150	1	0	0	0	0	0	0	3	0	0	0	0	5	0	0	0	0	0
SHEEPSHEAD MINNOW	0	0	0	246	391	17	188	1	892	67	172	0	11	3	4	9	4	1	23	51	16	15	3
THREESPINE STICKLEBACK	9	151+	3	637	24	15	2	2	0	1	1	0	1	1		6	2	2	33	1	11	0	0
WHITE PERCH	44	3	55	85	51	30	56	20	32	47	59	10	68	7	20	43	8	32	8	19	12	13	95
FRESHWATER																							
BLUEGILL	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BROWN TROUT	0	0	0	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0
CARP	0	18	0	0	2	16	12	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0
GIZZARD SHAD	0	0	0	0	1	0	4	0	0	0	0	4	0	0	2	0	0	0	1	0	2	0	1
GOLDEN SHINER	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LARGEMOUTH BASS	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RAINBOW TROUT	0	0	0	0	8	7	1	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0
REDBREAST SUNFISH	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
REDFIN PICKEREL	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL FINFISH	36343+	15545+	92340+	141580	310033	149650	107343	105785	117098	47899	87168	43103	60021	71780	71918	200276	127160	162061	198223	268235	355391	192438	74336
# SEINES	197	96	147	189	195	147	130	117	108	120	133	69	97	91	92	119	154	189	181	210	193	174	185
# DIADROMOUS	7	6	6	6	6	7	6	6	6	5	5	3	6	4	6	5	4	7	6	5	6	6	5
# MARINE	39	31	30	39	40	36	35	32	29	26	36	28	25	30	32	34	34	46	47	40	34	39	39
# ESTUARINE	6	7	6	7	8	8	6	6	5	6	6	4	7	6	3	5	5	7	6	5	5	5	4
# FRESH WATER	0	1	0	0	5	4	3	2	2	1	2	2	0	0	1	0	0	0	0	0	1	0	1
TOTAL # SPECIES	52	44	42	52	59	55	50	46	42	38	49	37	38	40	42	44	43	60	59	50	46	50	49
INVERTEBRATES																							
BLUE CRAB	11	100	59	56	648	888	314	743	1584	169	144	442	177	124	1132	1681	1040	752	789	223	205	537	1163
CALICO (LADY) CRAB	4	6	261+	889	165	125	194	548	186	1017	371	272	170	81	261	341	72	709	600	445	1154	1310	384
GREEN CRAB	0	0	0	0	60	92	78	235	77	348	32	0	26	65	75	92	68	296	271	318	168	377	184
HORSESHOE CRAB	0	3	44+	113	154	168	94	172	70	282	89	95	121	226	116	152	219	138	291	353	135	122	160
JAPANESE SHORE CRAB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	28	21	15	18	33	39
LOBSTER	0	0	0	3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MANTIS SHRIMP	0	0	0	1	8	0	0	1	5	0	0	0	0	0	0	0	1	11	5	1	0	0	0
MUD CRAB	0	0	3	0	0	0	5	2	1	0	9	1	40	2	139	104	246	85	211	193	254	363	298
ROCK CRAB	0	0	9	2	18	45	0	4	10	0	0	4	8	4	10	4	14	3	5	0	7	13	5
SPIDER CRAB	4	0	14	58	59	8	11	25	6	9	7	4	4	3	5	6	5	32	46	59	23	113	44
HARD CLAM (QUOHOG)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	32	1	0	0	0
LONG-FINNED SQUID	1	0	0	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	1	0	0	0	4
MOON SNAIL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1
MUSSEL, BLUE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
MUSSEL, RIBBED	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0
OYSTER	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	2
STARFISH	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	8
CLAM WORM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
CHANNELED WHELK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	4
KNOBBED WHELK	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
REPTILES																							
DIAMONDBACK TERRAPIN	1	0	0	0	1	2	1	1	0	2	0	0	1	0	0	0	1	2	0	0	1	1	5
SNAPPING TURTLE	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RED-EARED SLIDER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0

+ - too numerous to count

TABLE 18 NUMBER OF SPECIES BY BAY FROM 1984 - 2006

LITTLE NECK BAY

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
DIADROMOUS	6	6	5	4	5	4	4	3	3	2	5	4	3	3	2	6	3	5	5	3	3
MARINE	12	13	23	13	22	15	13	15	20	12	15	16	13	17	23	21	29	26	20	20	20
ESTUARINE	5	3	5	3	2	2	4	4	3	2	4	3	2	3	2	3	3	2	6	3	2
FRESHWATER	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
TOTAL	**23**	**22**	**33**	**20**	**29**	**21**	**21**	**22**	**26**	**17**	**24**	**23**	**18**	**23**	**27**	**30**	**35**	**33**	**31**	**26**	**25**
SEINES	35	34	40	29	38	22	30	29	30	21	26	20	25	36	36	29	29	40	39	30	35

MANHASSET BAY

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
DIADROMOUS	6	3	3	6	3	5	3	2	3	3	4	3	5	4	3	4	3	4	1	2	3
MARINE	18	14	15	18	18	20	19	18	16	11	13	14	18	15	22	27	25	21	37	15	8
ESTUARINE	5	6	5	3	4	3	5	4	4	3	3	4	2	5	4	5	4	5	6	3	3
FRESHWATER	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	1
TOTAL	**29**	**23**	**23**	**27**	**25**	**28**	**27**	**24**	**23**	**18**	**20**	**21**	**25**	**25**	**29**	**36**	**33**	**30**	**45**	**20**	**15**
SEINES	34	39	26	32	20	32	31	25	25	20	30	25	22	27	40	38	42	40	41	30	34

JAMAICA BAY

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
DIADROMOUS	5	4	5	5	4	6	3	3	4	1	4	4	2	2	4	3	3	5	5	5	3
MARINE	23	23	24	29	28	27	26	21	30	26	23	26	27	31	30	32	36	29	30	33	33
ESTUARINE	2	4	4	4	4	3	4	3	3	2	3	4	3	4	4	3	3	2	6	3	3
FRESHWATER	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	3	0	0	1	0	0
TOTAL	**30**	**31**	**33**	**38**	**36**	**36**	**33**	**27**	**37**	**29**	**30**	**34**	**32**	**38**	**40**	**41**	**42**	**36**	**42**	**41**	**39**
SEINES	43	59	52	56	50	58	44	48	56	26	33	42	45	52	78	61	59	64	59	60	59

TABLE 19 FIVE MOST ABUNDANT SPECIES BY BAY 1984 - 2006

LITTLE NECK BAY

RANK	1	2	3	4	5
1986	bay anchovy	silversides	killifish	menhaden	Atlantic herring
1987	silversides	bay anchovy	bluefish	killifish	winter flounder
1988	silversides	menhaden	killifish	winter flounder	striped bass
1989	silversides	bay anchovy	killifish	bluefish	tomcod
1990	bay anchovy	silversides	menhaden	killifish	striped bass
1991	silversides	blueback herring	bay anchovy	killifish	striped bass
1992	silversides	menhaden	bay anchovy	killifish	striped bass
1993	silversides	killifish	striped bass	Atlantic herring	bay anchovy
1994	silversides	menhaden	striped bass	killifish	winter flounder
1995	silversides	killifish	striped bass	tomcod	bay anchovy
1996	silversides	killifish	Atlantic herring	striped bass	tomcod
1997	silversides	bay anchovy	striped bass	menhaden	killifish
1998	silversides	killifish	menhaden	striped bass	bay anchovy
1999	menhaden	silversides	striped bass	killifish	bay anchovy
2000	silversides	striped bass	bay anchovy	menhaden	killifish
2001	silversides	striped bass	bluefish	bay anchovy	winter flounder
2002	silversides	menhaden	bay anchovy	killifish	striped bass
2003	menhaden	silversides	winter flounder	bay anchovy	killifish
2004	silversides	bay anchovy	killifish	striped bass	winter flounder
2005	silversides	menhaden	scup	killifish	bluefish
2006	silversides	striped bass	menhaden	killifish	bay anchovy

MANHASSET BAY

RANK	1	2	3	4	5
1986	Atlantic herring	killifish	silversides	bluefish	bay anchovy
1987	silversides	killifish	bay anchovy	winter flounder	bluefish
1988	silversides	killifish	bay anchovy	Atlantic herring	winter flounder
1989	silversides	killifish	bay anchovy	bluefish	winter flounder
1990	silversides	killifish	bay anchovy	winter flounder	sand lance
1991	silversides	menhaden	killifish	bay anchovy	winter flounder
1992	silversides	killifish	winter flounder	sheepshead minnow	Atlantic herring
1993	Atlantic herring	silversides	killifish	winter flounder	striped bass
1994	silversides	killifish	striped bass	bay anchovy	winter flounder
1995	silversides	killifish	striped bass	Atlantic herring	bluefish
1996	silversides	killifish	Atlantic herring	striped bass	bay anchovy
1997	silversides	killifish	bay anchovy	menhaden	striped bass
1998	silversides	killifish	striped bass	winter flounder	bay anchovy
1999	silversides	Atlantic herring	killifish	menhaden	winter flounder
2000	silversides	striped bass	killifish	bluefish	winter flounder
2001	silversides	killifish	bluefish	winter flounder	striped bass
2002	silversides	menhaden	killifish	bay anchovy	winter flounder
2003	silversides	menhaden	killifish	winter flounder	bay anchovy
2004	silversides	menhaden	killifish	striped bass	winter flounder
2005	silversides	menhaden	killifish	striped bass	winter flounder
2006	killifish	silversides	bluefish	striped bass	bay anchovy

JAMAICA BAY

RANK	1	2	3	4	5
1986	silversides	killifish	bay anchovy	bluefish	pipefish
1987	silversides	killifish	bluefish	bay anchovy	winter flounder
1988	silversides	killifish	bay anchovy	Atlantic herring	winter flounder
1989	silversides	killifish	bay anchovy	bluefish	striped bass
1990	silversides	killifish	bay anchovy	winter flounder	bluefish
1991	silversides	killifish	bay anchovy	winter flounder	striped bass
1992	silversides	killifish	winter flounder	bay anchovy	sand lance
1993	silversides	killifish	winter flounder	bluefish	white mullet
1994	silversides	killifish	winter flounder	bluefish	pipefish
1995	silversides	killifish	winter flounder	striped bass	bluefish
1996	silversides	Atlantic herring	striped bass	bay anchovy	killifish
1997	silversides	killifish	bluefish	bay anchovy	winter flounder
1998	silversides	killifish	bay anchovy	striped searobin	northern kingfish
1999	menhaden	silversides	killifish	winter flounder	bay anchovy
2000	silversides	killifish	winter flounder	menhaden	striped bass
2001	silversides	killifish	Atlantic herring	menhaden	bluefish
2002	silversides	menhaden	bay anchovy	killifish	bluefish
2003	silversides	bay anchovy	winter flounder	killifish	menhaden
2004	silversides	killifish	bay anchovy	bluefish	striped bass
2005	menhaden	silversides	bluefish	killifish	winter flounder
2006	bay anchovy	silversides	killifish	winter flounder	bluefish

TABLE 20 WLI BLUEFISH TOTAL CATCH PER UNTI EFFORT 1984 - 2006

YEAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	TOTAL
1984		0.00	3.00	20.56	27.75				10.50
1985	0.00	0.00		20.56	3.93				2.50
1986	0.00	0.03	14.62	26.40	236.00		5.00		24.39
1987	0.00	0.00	14.86	252.55	26.15	39.50	1.11		62.37
1988	0.00	0.00	0.50	26.60	8.09	8.35	0.00	0.00	4.67
1989	0.00	0.29	4.09	28.45	119.94	5.70	0.12	0.00	19.24
1990	0.00	0.00	1.35	21.61	11.87	35.38	2.20	0.00	6.95
1991	0.00	0.00	0.65	26.69	22.07	4.80			9.78
1992		0.00	1.57	19.36	39.14	8.38	1.67		8.87
1993		0.00	0.18	7.79	7.43				3.32
1994		0.00	0.38	8.00	4.57	2.46	0.00		2.65
1995		0.00	0.48	6.77	11.53				3.99
1996		0.00	0.06	8.50	9.00	9.44	0.00		2.84
1997		0.00	0.00	45.22	18.92	10.83	17.93	0.00	11.15
1998		0.00	1.15	0.67	2.80	14.00	3.21		4.20
1999	0.00	0.05	4.71	5.56	8.64		5.79		3.17
2000		0.14	0.04	3.27	177.82	11.00	2.19	0.00	27.07
2001		0.05	3.47	77.61	68.35	11.72	0.07	0.00	27.14
2002		0.00	1.02	10.24	11.36	53.39	3.29		13.54
2003	0.00	0.00	0.07	5.48	20.47	3.17	0.07		4.35
2004		0.00	3.33	4.45	26.23	24.45	7.03		9.41
2005	0.00	0.00	0.30	13.93	49.14	54.35	2.96		23.37
2006		0.00	15.70	38.16	66.78	14.53	5.20		23.69

YEAR	BPB	HEM	JAM	LNB	MAN	OSB	PJH	SOB	STI
1984		1.09	4.70	24.69	10.00			10.47	13.85
1985	11.44	0.00	3.11	0.00	0.67		37.00	1.68	0.00
1986		68.50	7.72	3.23	72.38			4.89	5.91
1987		1.35	72.64	198.71	5.31			5.56	43.00
1988	6.70	2.74	3.48	9.75	3.12		0.00	0.00	0.00
1989	0.75	0.00	12.02	41.69	24.69			0.00	2.50
1990	28.60	0.00	5.66	6.39	11.70				
1991	4.20		8.66	10.77	12.00				
1992	0.00		7.34	13.80	7.13				
1993	6.75		4.27	1.59	1.84		5.86		
1994	3.13		5.21	0.10	1.28		0.00		
1995	0.00		8.15	0.38	2.75				
1996	0.00		3.91	2.19	2.97		0.00		
1997			21.12	0.10	5.04		0.00		
1998			6.96	0.92	2.27				
1999			5.00	1.53	2.30		0.00		
2000			5.15	1.50	92.83				
2001		42.00	13.67	9.41	57.05	58.09	18.84		
2002		0.00	10.83	3.28	0.88	71.00	4.52		
2003			5.78	5.63	0.28	10.93	0.05		
2004			12.10	5.85	8.32	17.59	0.96		
2005		0.50	48.08	31.67	2.40	3.41	2.76		
2006		54.30	15.56	6.43	14.94	42.20			

TABLE 21 2006 WLI BLUEFISH TOTAL LENGTH FREQUENCIES

TL	MAY	JUNE	JULY	AUG	SEP	OCT	TOTAL	%
0-19		0	0	0	0	0	0	0.0
20-39		0	0	0	0	0	0	0.0
40-59		95	0	1	0	0	96	8.4
60-79		96	1	0	1	0	98	8.6
80-99		28	9	2	27	0	66	5.8
100-119		0	97	11	42	2	152	13.4
120-139		0	103	57	48	25	233	20.5
140-159		0	19	145	18	15	197	17.3
160-179		0	1	106	22	20	149	13.1
180-199		0	0	33	38	8	79	6.9
200-219		0	0	15	21	3	39	3.4
220-239		0	0	5	14	1	20	1.8
240-259		0	0	1	4	0	5	0.4
260-279		0	0	0	0	0	0	0.0
280-299		0	0	0	0	0	0	0.0
300-319		0	0	0	0	0	0	0.0
320-339		0	2	0	0	0	2	0.2
340-359		0	1	0	0	0	1	0.1
360-379		0	0	0	0	0	0	0.0
380-399		0	0	0	0	0	0	0.0
400-419		0	0	0	0	0	0	0.0
420-439		0	0	0	0	0	0	0.0
440-459		0	0	0	0	0	0	0.0
460-479		0	0	0	0	0	0	0.0
480-499		0	0	0	0	0	0	0.0
500-519		0	0	0	0	0	0	0.0
520-539		0	0	0	0	0	0	0.0
540-559		0	0	0	0	0	0	0.0
560-579		0	0	0	0	0	0	0.0
580-599		0	0	0	0	0	0	0.0
600-619		0	0	0	0	0	0	0.0
620-639		0	0	0	0	0	0	0.0
640-659		0	0	0	0	0	0	0.0
660-679		0	0	0	0	0	0	0.0
>680		0	0	0	1	0	1	0.1
NO TL	0	252	950	1761	200	82	3245	
TOTAL	0	471	1183	2137	436	156	4383	
SEINES	32	30	31	32	30	30	185	

TL	HEM	JAM	LNB	MAN	OSB	TOTAL	%
0-19	0	0	0	0	0	0	0.0
20-39	0	0	0	0	0	0	0.0
40-59	0	96	0	0	0	96	8.4
60-79	9	78	2	2	7	98	8.6
80-99	12	10	27	2	15	66	5.8
100-119	29	36	21	32	34	152	13.4
120-139	48	85	35	26	39	233	20.5
140-159	44	52	13	52	36	197	17.3
160-179	58	25	16	19	31	149	13.1
180-199	22	15	15	7	20	79	6.9
200-219	16	16	2	1	4	39	3.4
220-239	14	6	0	0	0	20	1.8
240-259	4	1	0	0	0	5	0.4
260-279	0	0	0	0	0	0	0.0
280-299	0	0	0	0	0	0	0.0
300-319	0	0	0	0	0	0	0.0
320-339	0	0	1	0	1	2	0.2
340-359	1	0	0	0	0	1	0.1
360-379	0	0	0	0	0	0	0.0
380-399	0	0	0	0	0	0	0.0
400-419	0	0	0	0	0	0	0.0
420-439	0	0	0	0	0	0	0.0
440-459	0	0	0	0	0	0	0.0
460-479	0	0	0	0	0	0	0.0
480-499	0	0	0	0	0	0	0.0
500-519	0	0	0	0	0	0	0.0
520-539	0	0	0	0	0	0	0.0
540-559	0	0	0	0	0	0	0.0
560-579	0	0	0	0	0	0	0.0
580-599	0	0	0	0	0	0	0.0
600-619	0	0	0	0	0	0	0.0
620-639	0	0	0	0	0	0	0.0
640-659	0	0	0	0	0	0	0.0
660-679	0	0	0	0	0	0	0.0
>680	0	0	1	0	0	1	0.1
NO TL	1209	498	92	367	1079	3245	
TOTAL	1466	918	225	508	1266	4383	
SEINES	27	59	35	34	30	185	

TABLE 22 WLI BLUEFISH TOTAL LENGTH FREQUENCIES 1984 - 2006

TL	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
0-19	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
20-39	0	43	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0
40-59	33	126	8	12	10	2	32	9	5	0	0	0	9	16	5	15	7	15	0	2	96
60-79	342	276	98	25	64	6	52	47	8	12	8	32	28	30	18	62	38	50	23	18	98
80-99	528	230	120	122	147	85	114	62	31	23	75	26	13	7	52	149	41	27	52	62	66
100-119	256	208	103	108	72	126	48	74	47	33	60	41	12	15	70	216	157	33	71	114	152
120-139	85	141	63	126	95	68	63	82	63	15	14	119	43	28	50	162	219	46	117	155	233
140-159	32	105	67	78	80	75	39	48	57	32	24	94	19	40	55	226	130	45	118	153	197
160-179	15	98	49	69	36	132	17	24	42	24	33	38	31	22	63	305	68	84	75	135	149
180-199	24	92	19	39	16	50	0	10	10	4	36	24	34	16	8	220	62	29	50	57	79
200-219	4	72	5	17	10	31	0	1	0	0	18	12	35	7	14	104	36	17	37	53	39
220-239	4	9	7	5	2	8	0	0	2	0	1	17	8	8	14	40	79	12	30	43	20
240-259	0	1	1	0	0	0	0	0	2	0	0	5	1	7	5	19	51	8	3	18	5
260-279	0	1	0	0	0	0	0	0	0	0	0	1	0	9	0	3	11	0	3	4	0
280-299	0	0	0	0	0	0	1	0	0	0	0	0	1	2	0	2	4	0	2	0	0
300-319	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0
320-339	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
340-359	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	1
360-379	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
380-399	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
400-419	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
420-439	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
440-459	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
460-479	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
480-499	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
500-519	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
520-539	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
540-559	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
560-579	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
580-599	1	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
600-619	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
620-639	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
640-659	5	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
660-679	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
>680	4	0	4	0	0	1	1	0	0	2	0	0	0	0	0	3	0	0	2	8	1
NO TL	2263	10386	370	2227	371	561	593	41	85	132	6	606	152	167	3814	3607	1548	548	1238	3243	3245
TOTAL	3609	11792	914	2829	903	1145	963	400	352	279	275	1015	387	377	4169	5133	2459	915	1826	4066	4383
SEINES	147	189	195	147	130	117	108	120	133	69	97	91	92	119	154	189	181	210	193	174	185

TABLE 23 WLI SPECIES TOTAL CATCH PER UNIT EFFORT 1984 - 2006

WINTER FLOUNDER CPUE

YEAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	TOTAL
1984		7.34	5.03	3.00	2.57				4.77
1985	2.59	2.51		1.89	5.36				2.90
1986	2.29	1.58	7.76	17.36	10.67		1.00		7.63
1987	0.83	3.91	13.25	11.18	3.48	2.43	0.44		6.11
1988	1.50	1.60	24.02	85.10	13.74	0.55	5.71	8.08	17.77
1989	4.20	2.29	10.48	6.27	1.59	2.30	0.71	0.75	4.12
1990	0.20	8.86	19.23	15.22	15.07	0.50	0.40	1.75	11.54
1991	1.33	10.29	61.87	19.83	13.07	0.40			22.50
1992		3.00	62.93	75.14	10.07	3.25	2.00		29.80
1993		1.79	17.08	39.79	15.00				19.56
1994		3.25	31.24	31.56	19.81	4.08	14.91		17.08
1995		0.75	46.07	18.92	2.80				23.67
1996		4.38	40.88	5.39	0.50	3.89	3.25		10.62
1997		1.00	9.44	13.00	3.58	1.00	1.29	7.60	5.44
1998		7.58	46.80	38.42	4.70	1.26	2.89		17.54
1999	1.08	9.17	82.14	8.72	1.09		0.64		19.34
2000		29.61	86.12	56.88	5.27	3.11	1.74	3.33	31.07
2001		6.40	40.40	58.91	11.08	3.42	3.19	5.17	18.00
2002		17.90	48.57	12.96	4.18	3.97	1.24		18.08
2003	0.00	1.09	89.46	87.48	24.37	6.75	5.87		41.52
2004		9.68	28.40	20.87	16.00	3.30	1.29		14.61
2005	0.00	8.43	29.23	33.20	16.83	6.29	1.54		16.61
2006		5.88	70.23	8.03	3.34	1.27	0.10		14.55

SUMMER FLOUNDER CPUE

YEAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	TOTAL
1984		0.20	0.95	0.33	0.51				0.58
1985	0.00	0.00		0.67	0.21				0.09
1986	0.00	0.13	0.48	0.55	1.33		0.00		0.34
1987	0.00	0.13	0.29	0.05	0.07	0.14	0.00		0.11
1988	0.00	0.00	0.16	0.10	0.00	0.00	0.00	0.00	0.05
1989	0.00	0.00	1.09	0.23	0.18	0.10	0.00	0.00	0.23
1990	0.00	0.02	0.10	0.28	0.20	0.00	0.00	0.00	0.09
1991	0.00	0.36	1.13	1.07	0.13	0.20			0.64
1992		0.26	0.10	0.43	0.21	0.00	0.00		0.18
1993		0.00	0.14	1.00	0.74				0.43
1994		0.05	0.19	1.37	0.38	0.15	0.09		0.41
1995		0.00	0.41	0.08	0.27				0.25
1996		0.05	0.00	0.33	0.00	0.00	0.00		0.08
1997		0.08	0.07	0.11	0.17	0.00	0.00	0.00	0.07
1998		0.00	0.15	0.25	0.30	0.05	0.00		0.11
1999	0.00	0.00	0.62	0.11	0.00		0.00		0.13
2000		0.11	0.77	0.23	0.05	0.00	0.00	0.00	0.19
2001		0.00	0.20	0.09	0.10	0.02	0.00	0.00	0.07
2002		0.03	0.14	0.28	0.14	0.09	0.00		0.12
2003	0.00	0.00	0.17	0.20	0.03	0.00	0.00		0.08
2004		0.00	0.18	0.08	0.27	0.10	0.15		0.13
2005		0.00	0.13	0.13	0.31	0.00	0.00		0.11
2006		0.00	0.13	0.13	0.22	0.03	0.00		0.09

YEAR	BPB	HEM	JAM	LNB	MAN	OSB	PJH	SOB	STI
1984		7.55	2.82	3.85	9.76			4.78	2.00
1985	0.00	1.83	1.00	3.83	7.28		0.00	3.16	0.14
1986		54.50	7.02	3.86	2.35			2.89	1.82
1987		1.26	6.93	6.44	6.08			11.61	3.25
1988	0.50	5.11	12.00	14.65	9.65		47.56	9.00	9.54
1989	5.81	4.00	3.29	2.90	6.03			3.00	1.25
1990	0.00	0.67	15.96	4.08	25.05				
1991	1.00		35.97	1.73	15.72				
1992	11.33		38.84	1.70	45.94				
1993	0.00		12.25	5.07	33.20		98.57		
1994	0.13		24.93	11.97	6.76		30.20		
1995	0.00		60.50	0.62	2.35				
1996	0.00		8.03	2.31	1.20		0.33		
1997			8.93	2.50	2.72		0.50		
1998			21.93	1.12	27.23				
1999			19.13	9.28	34.89		7.75		
2000			35.19	13.00	39.30				
2001		0.00	11.66	7.69	51.79	2.86	12.92		
2002		0.00	11.19	8.38	39.69	29.81	2.63		
2003			71.52	39.63	40.90	13.14	14.58		
2004			9.37	9.44	11.32	42.31	8.28		
2005		1.25	13.13	11.97	4.43	43.24	16.71		
2006		1.07	37.14	1.26	1.29	12.80			

YEAR	BPB	HEM	JAM	LNB	MAN	OSB	PJH	SOB	STI
1984		0.18	0.16	0.23	0.14			0.25	2.00
1985	0.22	0.00	0.33	0.00	0.00		0.00	0.05	0.00
1986		0.00	0.60	0.14	0.03			0.56	1.00
1987		0.00	0.05	0.18	0.13			0.33	0.00
1988	0.00	0.00	0.02	0.13	0.00		0.11	0.00	0.23
1989	0.06	0.00	0.50	0.07	0.09			0.00	0.00
1990	0.00	0.00	0.16	0.05	0.10				
1991	2.20		0.91	0.14	0.25				
1992	2.00		0.11	0.17	0.10				
1993	1.00		0.88	0.03	0.00		0.71		
1994	0.00		0.91	0.03	0.00		0.20		
1995	0.50		0.58	0.05	0.00				
1996	0.00		0.24	0.00	0.00		0.00		
1997			0.07	0.05	0.08		0.00		
1998			0.22	0.00	0.00				
1999			0.29	0.00	0.00		0.00		
2000			0.36	0.06	0.00				
2001		0.00	0.07	0.03	0.16	0.00	0.00		
2002		0.00	0.17	0.21	0.07	0.05	0.00		
2003			0.13	0.18	0.05	0.00	0.00		
2004			0.29	0.18	0.00	0.03	0.00		
2005		0.00	0.25	0.13	0.00	0.00	0.00		
2006		0.07	0.20	0.06	1.00	0.00			

TABLE 24 WLI WINTER FLOUNDER TOTAL LENGTH FREQUENCIES

TL	MAY	JUNE	JULY	AUG	SEP	OCT	HEM	JAM	LNB	MAN	OSB	TOTAL	%
0-19	0	0	0	0	0	0	0	0	0	0	0	0	0.0
20-39	94	57	5	1	0	0	0	121	0	2	34	157	19.2
40-59	56	201	86	19	7	0	9	259	9	12	80	369	45.2
60-79	2	70	88	36	16	1	14	85	19	16	79	213	26.1
80-99	0	0	23	18	11	1	4	10	5	9	25	53	6.5
100-119	7	0	0	0	1	1	0	1	1	1	6	9	1.1
120-139	4	0	0	0	1	0	0	0	1	1	3	5	0.6
140-159	2	1	0	0	1	0	1	1	2	0	0	4	0.5
160-179	0	0	1	0	0	0	0	0	1	0	0	1	0.1
180-199	1	1	1	0	0	0	1	0	1	0	1	3	0.4
200-219	0	0	0	0	1	0	0	0	1	0	0	1	0.1
220-239	0	0	0	0	0	0	0	0	0	0	0	0	0.0
240-259	0	0	0	0	0	0	0	0	0	0	0	0	0.0
260-279	0	0	0	0	0	0	0	0	0	0	0	0	0.0
280-299	0	0	0	0	0	0	0	0	0	0	0	0	0.0
300-319	1	0	0	0	0	0	0	0	1	0	0	1	0.1
320-339	0	0	0	0	0	0	0	0	0	0	0	0	0.0
340-359	1	0	0	0	0	0	0	0	1	0	0	1	0.1
360-379	0	0	0	0	0	0	0	0	0	0	0	0	0.0
380-399	0	0	0	0	0	0	0	0	0	0	0	0	0.0
>400	0	0	0	0	0	0	0	0	0	0	0	0	0.0
NO TL	20	1777	45	33	0	0	0	1714	2	3	156	1875	
TOTAL	188	2107	249	107	38	3	29	2191	44	44	384	2692	
SEINES	32	30	31	32	30	30	27	59	35	34	30	185	

TL	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
0-19	0	0	1	0	27	0	3	0	1	0	1	0	0	5	3	1	5	2	0	0	0
20-39	20	87	212	79	225	141	225	145	201	31	156	36	71	245	420	251	212	333	100	197	157
40-59	301	469	603	141	344	538	471	516	479	216	95	254	298	438	875	719	745	1197	626	809	369
60-79	372	193	257	101	330	312	296	276	195	156	99	113	177	166	220	282	258	466	360	387	213
80-99	45	15	123	49	64	68	88	82	48	27	32	35	33	35	43	63	51	74	119	67	53
100-119	22	30	88	35	13	22	24	83	24	4	14	16	11	29	20	19	4	13	26	27	9
120-139	29	56	81	35	19	11	10	57	12	1	9	10	4	17	7	26	5	5	12	14	5
140-159	25	50	41	17	16	15	11	23	9	2	5	5	3	6	4	26	4	8	9	5	4
160-179	16	33	20	20	9	4	3	9	3	1	0	1	4	6	0	16	2	2	5	5	1
180-199	11	20	15	6	2	4	3	3	4	2	2	1	0	1	0	6	2	1	3	2	3
200-219	6	13	3	5	2	0	1	3	0	0	0	0	0	0	0	6	0	0	0	1	1
220-239	3	6	6	4	3	2	0	1	0	1	0	0	0	0	1	0	0	1	0	0	0
240-259	7	11	12	4	2	0	0	2	1	0	0	1	1	1	0	0	0	0	0	0	0
260-279	8	9	10	9	4	0	1	5	1	0	0	0	0	0	0	1	1	2	0	0	0
280-299	8	7	11	10	3	0	1	4	2	0	2	0	0	1	0	0	1	0	0	0	0
300-319	6	4	5	10	1	1	0	5	0	3	2	2	0	0	0	0	0	0	0	0	1
320-339	3	1	4	4	0	0	0	3	3	0	0	0	2	0	0	0	0	0	0	0	0
340-359	1	1	3	1	0	0	0	2	4	0	0	1	1	0	0	0	1	0	0	0	1
360-379	0	0	1	1	0	0	0	1	0	1	0	0	0	1	0	0	0	0	1	0	0
380-399	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>400	0	0	0	1	0	0	0	0	1	0	0	0	1	0	0	1	0	0	0	0	0
NO TL	237	149	1970	74	436	1514	2081	1127	1283	1188	613	20	1008	1351	3192	1985	1981	6616	1558	1376	1875
TOTAL	1121	1154	3466	606	1500	2632	3218	2347	2271	1633	1030	495	1614	2302	4785	3402	3272	2780	2819	2890	2692
SEINES	147	189	195	147	130	117	108	120	133	69	97	91	92	119	154	189	181	210	193	174	185

TABLE 25 WLI SUMMER FLOUNDER TOTAL LENGTH FREQUENCIES

TL	MAY	JUNE	JULY	AUG	SEP	OCT	HEM	JAM	LNB	MAN	OSB	TOTAL	%
0-19		0	0	0	0		0	0	0			0	0.0
20-39		0	0	0	0		0	0	0			0	0.0
40-59		0	2	0	0		0	2	0			2	12.5
60-79		1	0	1	0		0	2	0			2	12.5
80-99		1	0	2	0		0	3	0			3	18.8
100-119		0	1	1	0		0	2	0			2	12.5
120-139		0	1	0	1		0	1	1			2	12.5
140-159		0	0	0	0		0	0	0			0	0.0
160-179		0	0	0	0		0	0	0			0	0.0
180-199		0	0	0	0		0	0	0			0	0.0
200-219		0	0	0	0		0	0	0			0	0.0
220-239		0	0	0	0		0	0	0			0	0.0
240-259		0	0	0	0		0	0	0			0	0.0
260-279		0	0	0	0		0	0	0			0	0.0
280-299		0	0	0	0		0	0	0			0	0.0
300-319		0	0	0	0		0	0	0			0	0.0
320-339		1	0	0	0		1	0	0			1	6.3
340-359		1	0	0	0		0	1	0			1	6.3
360-379		0	0	0	0		0	0	0			0	0.0
>380		0	0	3	0		1	1	1			3	18.8
NO TL	0	0	0	0	0	0	0	0	0	0	0	0	
TOTAL	0	4	4	7	1	0	2	12	2	0	0	16	
SEINES	32	30	31	32	30	30	27	59	35	34	30	185	

TL	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
0-19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
20-39	1	0	0	0	1	3	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0
40-59	7	1	0	10	1	7	3	2	4	0	0	0	1	2	5	0	0	0	3	0	2
60-79	3	0	0	9	1	8	3	13	9	4	2	0	3	2	8	1	3	2	1	0	2
80-99	7	0	0	8	0	14	1	14	13	6	2	0	0	0	4	0	2	1	2	1	3
100-119	7	0	0	0	2	12	1	6	6	0	2	0	0	0	3	2	0	1	2	1	2
120-139	5	0	0	1	1	7	1	4	0	2	0	0	2	0	1	0	2	0	4	0	2
140-159	7	0	0	2	1	6	2	1	4	0	0	0	0	0	0	0	0	0	0	0	0
160-179	4	0	0	1	0	1	0	0	1	0	0	0	0	0	0	0	1	0	0	2	0
180-199	0	0	0	1	1	2	0	1	3	1	0	0	0	0	0	0	0	0	1	1	0
200-219	1	1	0	0	0	2	0	1	2	2	0	0	0	0	0	0	1	0	2	0	0
220-239	0	2	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2	0	1	1	0
240-259	2	2	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0
260-279	0	4	2	0	0	3	1	3	0	0	0	1	0	0	0	0	0	0	0	2	0
280-299	1	4	3	0	2	2	1	1	4	0	1	0	0	1	0	1	0	2	0	3	0
300-319	3	4	2	0	0	2	0	2	3	0	1	2	1	4	0	2	0	5	0	1	0
320-339	1	0	2	0	0	0	1	2	2	1	0	0	1	1	1	2	2	3	0	0	1
340-359	0	0	0	0	1	1	2	0	0	1	0	1	0	5	0	0	1	0	2	3	1
360-379	0	1	1	0	0	1	1	1	1	0	0	0	0	0	0	1	3	0	1	2	0
>380	0	0	0	0	0	1	1	0	1	0	0	1	1	0	1	3	4	1	3	3	3
NO TL	1	1	0	1	1	1	1	0	1	0	0	1	1	0	3	0	0	1	0	0	0
TOTAL	50	20	10	34	12	75	19	52	54	17	8	6	10	15	30	13	21	17	25	20	16
SEINES	147	189	195	147	130	117	108	120	133	69	97	91	92	119	154	189	181	210	193	174	185

TABLE 26 WLI SPECIES TOTAL CATCH PER UNIT EFFORT 1984 - 2006

ATLANTIC TOMCOD CPUE

YEAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	TOTAL
1984		9.02	1.99	1.44	0.25				3.25
1985	0.00	1.90		0.33	0.00				0.80
1986	0.00	0.68	0.10	0.57	0.00		0.00		0.35
1987	0.00	4.04	0.04	0.28	0.00	1.07	0.00		1.15
1988	0.00	6.51	1.36	0.45	0.04	0.00	0.00	0.25	1.85
1989	0.00	12.56	1.04	0.14	0.00	0.00	0.00	0.00	3.09
1990	0.00	3.68	1.74	0.06	0.07	0.00	0.00	0.00	1.68
1991	6.67	0.83	0.04	0.00	0.00	0.00			0.48
1992		0.33	0.10	0.07	0.00	0.00	0.00		0.12
1993		4.74	0.34	0.07	0.04				0.92
1994		3.35	0.95	0.00	0.00	0.00	0.00		1.16
1995		2.50	0.28	0.00	0.07				0.57
1996		2.68	1.18	0.00	0.00	0.00	0.00		1.23
1997		1.33	1.19	0.00	0.00	0.00	0.00	0.00	0.53
1998		11.92	0.10	0.17	0.00	0.00	0.05		1.61
1999	0.00	3.36	0.19	0.00	0.00		0.00		1.22
2000		2.25	0.15	0.04	0.00	0.00	0.00	0.00	0.44
2001		13.20	1.83	0.09	0.08	0.00	0.22	0.00	1.75
2002		0.17	0.09	0.00	0.00	0.00	0.00		0.05
2003	0.00	0.88	0.83	0.10	0.00	0.00	0.00		0.34
2004		2.29	0.50	0.16	0.27	0.05	0.00		0.55
2005		10.86	1.93	0.50	0.14	0.00	0.00		1.76
2006		2.44	0.27	0.00	0.00	0.00	0.00		0.46

AMERICAN EEL CPUE

YEAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	TOTAL
1984		0.22	0.93	0.11	0.57				0.58
1985	0.03	0.21		1.33	0.21				0.25
1986	0.07	0.18	0.14	1.10	1.89		0.00		0.51
1987	0.00	0.62	0.71	0.15	0.00	0.07	0.00		0.30
1988	0.05	0.30	0.98	0.85	1.48	0.15	0.00	0.08	0.61
1989	0.10	0.09	1.13	0.14	0.06	0.00	0.00	0.00	0.24
1990	0.00	0.09	0.06	0.17	0.00	0.00	0.00	0.00	0.07
1991	0.00	0.05	0.04	0.00	0.00	0.00			0.03
1992		0.07	0.07	0.00	0.00	0.00	0.00		0.04
1993		0.00	0.04	0.00	0.09				0.03
1994		0.05	0.05	0.22	0.05	0.00	0.00		0.08
1995		0.00	0.00	0.00	0.00				0.00
1996		0.05	0.41	0.00	0.00	0.00	0.00		0.09
1997		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1998		0.00	0.00	0.00	0.10	0.00	0.05		0.02
1999	0.00	0.00	0.05	0.00	0.00		0.00		0.01
2000		0.00	0.04	0.04	0.09	0.00	0.03	0.00	0.03
2001		0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.01
2002		0.00	0.00	0.04	0.00	0.15	0.00		0.03
2003	0.00	0.88	0.07	0.03	0.00	0.00	0.00		0.16
2004		0.00	0.05	0.08	0.03	0.00	0.00		0.03
2005		0.05	0.00	0.00	0.11	0.00	0.00		0.03
2006		0.00	0.00	0.00	0.00	0.03	0.00		0.01

YEAR	BPB	HEM	JAM	LNB	MAN	OSB	PJH	SOB	STI
1984		7.05	0.32	12.81	2.79			0.22	1.47
1985	0.11	1.33	0.11	3.25	1.06		0.00	0.00	0.00
1986		1.25	0.00	0.31	0.85			0.00	0.18
1987		0.00	0.03	5.24	0.31			0.56	0.00
1988	0.95	1.53	0.08	6.43	1.54		0.11	0.00	0.77
1989	0.19	0.00	0.07	12.55	0.59			0.00	16.00
1990	0.00	2.50	0.56	2.63	2.35				
1991	0.00		0.05	2.36	0.03				
1992	0.00		0.00	0.43	0.00				
1993	0.00		0.00	3.76	0.00		0.00		
1994	0.50		0.14	3.30	1.32		1.00		
1995	0.00		0.00	1.38	0.50				
1996	0.00		0.03	4.00	0.43		0.33		
1997			0.14	0.80	0.96		0.50		
1998			0.00	5.48	0.50				
1999			0.00	3.69	0.44		0.00		
2000			0.01	1.72	0.13				
2001		0.00	0.08	5.48	3.92	0.05	0.36		
2002		0.00	0.00	0.31	0.00	0.00	0.00		
2003			0.03	1.60	0.08	0.04	0.05		
2004			0.02	1.64	0.00	0.31	1.28		
2005		0.00	0.02	8.23	0.17	0.52	1.81		
2006		1.15	0.00	0.69	0.00	1.03			

YEAR	BPB	HEM	JAM	LNB	MAN	OSB	PJH	SOB	STI
1984		1.55	0.55	0.12	1.45			0.06	0.06
1985	0.89	0.58	0.28	0.08	0.06		0.00	0.11	0.00
1986		5.13	0.21	0.09	0.53			0.11	0.27
1987		0.83	0.05	0.03	0.79			0.06	0.00
1988	3.00	1.00	0.17	0.00	0.00		0.11	0.00	0.23
1989	1.31	0.00	0.20	0.00	0.06			0.50	0.00
1990	0.60	0.00	0.08	0.00	0.00				
1991	0.40		0.02	0.00	0.00				
1992	0.00		0.05	0.00	0.06				
1993	0.00		0.04	0.07	0.00		0.00		
1994	0.38		0.09	0.03	0.00		0.10		
1995	0.00		0.00	0.00	0.00				
1996	3.50		0.03	0.04	0.00		0.00		
1997			0.00	0.00	0.00		0.00		
1998			0.02	0.00	0.05				
1999			0.00	0.00	0.04		0.00		
2000			0.04	0.00	0.05				
2001		0.00	0.02	0.00	0.00	0.00	0.00		
2002		0.00	0.02	0.00	0.00	0.00	0.00		
2003			0.50	0.03	0.03	0.00	0.00		
2004			0.07	0.00	0.00	0.03	0.04		
2005		0.00	0.07	0.00	0.00	0.00	0.05		
2006		0.00	0.02	0.00	0.00	0.00			

TABLE 27 WLI ATLANTIC TOMCOD TOTAL LENGTH FREQUENCIES

TL	MAY	JUNE	JULY	AUG	SEP	OCT	HEM	JAM	LNB	MAN	OSB	TOTAL	%
0-9	0	0					0		0		0	0	0.0
10-19	0	0					0		0		0	0	0.0
20-29	0	0					0		0		0	0	0.0
30-39	4	0					3		0		1	4	4.8
40-49	35	0					12		12		11	35	41.7
50-59	29	0					9		5		15	29	34.5
60-69	6	1					1		4		2	7	8.3
70-79	2	4					3		2		1	6	7.1
80-89	0	2					1		1		0	2	2.4
90-99	0	1					0		0		1	1	1.2
100-109	0	0					0		0		0	0	0.0
110-119	0	0					0		0		0	0	0.0
120-129	0	0					0		0		0	0	0.0
130-139	0	0					0		0		0	0	0.0
140-149	0	0					0		0		0	0	0.0
150-159	0	0					0		0		0	0	0.0
160-169	0	0					0		0		0	0	0.0
170-179	0	0					0		0		0	0	0.0
180-189	0	0					0		0		0	0	0.0
>190	0	0					0		0		0	0	0.0
NO TL	2	0	0	0	0	0	2	0	0	0	0	2	
TOTAL	78	8	0	0	0	0	31	0	24	0	31	86	
SEINES	32	30	31	32	30	30	27	59	35	34	30	185	

TL	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
0-9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10-19	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	0	0	2	0
20-29	0	1	6	7	3	14	0	40	38	8	11	0	0	0	2	18	0	4	6	9	0
30-39	0	8	42	42	38	9	1	50	92	21	7	3	5	72	19	65	0	14	24	55	4
40-49	2	33	61	44	55	9	7	2	5	1	38	11	33	28	24	22	0	11	25	11	35
50-59	15	50	27	34	56	7	2	5	9	4	17	9	34	33	7	41	0	2	21	12	29
60-69	8	22	1	4	30	12	2	7	3	2	2	18	0	5	12	20	3	9	5	21	7
70-79	0	5	18	14	15	5	0	2	6	1	14	7	1	3	1	21	3	10	4	19	6
80-89	4	5	30	2	5	0	0	1	0	0	3	0	3	2	1	14	2	20	4	10	2
90-99	9	4	13	3	1	0	1	1	0	1	0	0	1	2	1	2	1	1	3	13	1
100-109	8	9	11	0	2	0	0	2	0	0	0	0	0	0	0	3	0	0	4	3	0
110-119	2	5	6	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	4	0	0
120-129	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0
130-139	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
140-149	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
150-159	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
160-169	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
170-179	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
180-189	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>190	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NO TL	1	73	143	304	13	0	0	0	0	1	27	0	71	0	0	119	0	1	5	151	2
TOTAL	52	217	361	454	218	56	13	110	154	39	119	48	148	145	68	330	9	72	106	306	86
SEINES	147	189	195	147	130	117	108	120	133	69	97	91	92	119	154	189	181	210	193	174	185

TABLE 28 WLI SPECIES TOTAL CATCH PER UNIT EFFORT 1984 - 2006

WEAKFISH CPUE

YEAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	TOTAL
1984		0.00	0.03	0.00	7.98				2.16
1985	0.00	0.00		0.00	0.00				0.00
1986	0.00	0.32	0.00	0.02	0.00		0.00		0.09
1987	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
1988	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.04
1989	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1990	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.12
1991	0.00	0.00	0.00	0.38	0.07	0.00			0.10
1992		0.00	0.00	0.00	0.00	0.00	0.00		0.00
1993		0.00	0.00	0.00	0.00				0.00
1994		0.00	0.10	0.00	0.00	0.00	0.00		0.02
1995		0.00	0.00	0.00	0.00				0.00
1996		0.00	0.00	0.00	0.00	0.00	0.00		0.00
1997		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1998		0.00	0.00	0.00	0.00	0.00	0.00		0.00
1999	0.00	0.00	0.00	0.06	0.00		0.00		0.01
2000		0.00	0.00	0.00	0.05	0.11	0.00	0.00	0.01
2001		0.00	0.00	9.04	2.15	0.00	0.04	0.00	1.56
2002		0.00	0.00	12.40	2.86	0.48	0.57		2.31
2003	0.00	0.00	0.00	0.00	0.50	0.00	0.00		0.07
2004		0.00	0.00	0.00	0.13	0.00	0.00		0.02
2005		0.00	0.00	0.27	0.74	0.00	0.00		0.20
2006		0.00	0.00	0.00	0.03	0.00	0.00		0.01

TAUTOG CPUE

YEAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	TOTAL
1984		0.10	0.30	0.50	1.06				0.47
1985	0.06	0.03		0.11	0.07				0.05
1986	0.04	0.11	0.00	0.90	0.33		1.22		0.39
1987	0.13	0.36	0.68	1.73	0.33	3.71	0.00		0.89
1988	0.00	0.49	1.04	3.00	3.65	0.95	0.86	0.08	1.25
1989	0.80	0.26	0.39	0.00	0.00	0.50	0.00	0.00	0.27
1990	0.00	0.05	0.26	0.00	1.13	0.38	1.80	0.00	0.30
1991	0.00	0.12	0.09	14.41	3.27	0.00			4.05
1992		0.15	0.10	0.07	1.57	1.63	0.33		0.44
1993		0.00	0.04	0.04	0.52				0.13
1994		0.03	0.10	0.41	0.14	0.08	0.00		0.14
1995		0.00	0.07	0.23	0.40				0.16
1996		0.03	0.06	0.11	0.00	0.00	0.17		0.06
1997		0.17	0.00	0.00	0.58	0.08	0.36	0.00	0.16
1998		0.00	0.00	0.08	0.00	0.16	0.47		0.14
1999	0.69	0.21	0.10	4.89	3.64		0.36		1.29
2000		0.25	0.23	1.69	0.91	3.56	1.45	0.17	1.01
2001		0.20	0.07	0.83	1.40	0.88	4.00	0.17	1.21
2002		0.10	0.00	3.80	6.25	5.82	0.38		2.61
2003	0.00	0.03	0.07	0.18	2.20	5.71	4.10		1.60
2004		0.32	0.30	1.74	3.97	1.60	0.06		1.25
2005		0.05	0.53	2.27	5.97	1.09	0.75		2.01
2006		0.59	0.10	1.39	1.25	0.53	0.17		0.68

YEAR	BPB	HEM	JAM	LNB	MAN	OSB	PJH	SOB	STI
1984		0.00	0.00	0.38	0.00			0.00	12.15
1985	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00
1986		0.00	0.00	0.00	0.00			0.11	1.09
1987		0.00	0.00	0.00	0.00			0.00	0.00
1988	0.00	0.00	0.00	0.18	0.00		0.00	0.00	0.00
1989	0.00	0.00	0.00	0.00	0.00			0.00	0.00
1990	0.00	0.00	0.00	0.39	0.00				
1991	2.20		0.00	0.05	0.00				
1992	0.00		0.00	0.00	0.00				
1993	0.00		0.00	0.00	0.00		0.00		
1994	0.00		0.04	0.00	0.00		0.00		
1995	0.00		0.00	0.00	0.00				
1996	0.00		0.00	0.00	0.00		0.00		
1997			0.00	0.00	0.00		0.00		
1998			0.00	0.00	0.00				
1999			0.00	0.03	0.00		0.00		
2000			0.01	0.03	0.00				
2001		0.00	0.00	0.52	7.32	0.05	0.00		
2002		0.00	0.39	9.72	1.43	0.81	0.78		
2003			0.00	0.28	0.00	0.07	0.05		
2004			0.00	0.00	0.00	0.14	0.00		
2005		0.00	0.17	0.00	0.00	0.86	0.00		
2006		0.00	0.00	0.00	0.00	0.03			

YEAR	BPB	HEM	JAM	LNB	MAN	OSB	PJH	SOB	STI
1984		0.23	0.00	0.00	1.03			0.47	0.29
1985	0.00	0.08	0.06	0.00	0.00		0.00	0.05	0.29
1986		0.13	0.33	0.00	0.12			0.00	3.27
1987		0.83	0.15	0.00	0.10			4.22	2.25
1988	0.40	3.47	0.13	0.95	0.27		4.67	0.00	0.38
1989	0.00	1.00	0.41	0.03	0.03			5.00	0.25
1990	0.00	0.33	0.30	0.03	0.65				
1991	0.20		0.81	1.77	12.09				
1992	0.00		0.57	0.47	0.29				
1993	0.00		0.02	0.00	0.04		1.86		
1994	0.00		0.25	0.00	0.00		0.40		
1995	0.00		0.27	0.10	0.10				
1996	0.00		0.12	0.04	0.03		0.00		
1997			0.12	0.05	0.28		0.50		
1998			0.09	0.12	0.27				
1999			0.62	2.86	0.59		0.50		
2000			0.46	1.89	1.30				
2001		0.00	0.64	0.10	0.03	0.05	2.88		
2002		0.00	0.15	0.97	1.48	0.00	9.04		
2003			0.16	1.03	0.85	1.50	5.53		
2004			1.08	0.10	0.02	0.38	6.44		
2005		0.75	3.02	0.50	0.80	2.21	2.95		
2006		2.04	0.44	0.43	0.09	0.90			

TABLE 29 WLI TAUTOG TOTAL LENGTH FREQUENCIES

TL	MAY	JUNE	JULY	AUG	SEP	OCT	HEM	JAM	LNB	MAN	OSB	TOTAL	%
0-19	0	0	0	0	0	0	0	0	0	0	0	0	0.0
20-39	0	0	26	2	2	0	22	2	3	1	2	30	24.2
40-59	3	0	17	21	4	1	16	7	4	2	17	46	37.1
60-79	14	1	0	16	9	4	13	16	8	0	7	44	35.5
80-99	1	2	0	0	1	0	3	1	0	0	0	4	3.2
100-119	0	0	0	0	0	0	0	0	0	0	0	0	0.0
120-139	0	0	0	0	0	0	0	0	0	0	0	0	0.0
140-159	0	0	0	0	0	0	0	0	0	0	0	0	0.0
160-179	0	0	0	0	0	0	0	0	0	0	0	0	0.0
180-199	0	0	0	0	0	0	0	0	0	0	0	0	0.0
200-219	0	0	0	0	0	0	0	0	0	0	0	0	0.0
220-239	0	0	0	0	0	0	0	0	0	0	0	0	0.0
240-259	0	0	0	0	0	0	0	0	0	0	0	0	0.0
260-279	0	0	0	0	0	0	0	0	0	0	0	0	0.0
280-299	0	0	0	0	0	0	0	0	0	0	0	0	0.0
300-319	0	0	0	0	0	0	0	0	0	0	0	0	0.0
320-339	0	0	0	0	0	0	0	0	0	0	0	0	0.0
340-359	0	0	0	0	0	0	0	0	0	0	0	0	0.0
360-379	0	0	0	0	0	0	0	0	0	0	0	0	0.0
380-399	0	0	0	0	0	0	0	0	0	0	0	0	0.0
>400	0	0	0	0	0	0	0	0	0	0	0	0	0.0
NO TL	1	0	0	1	0	0	1	0	0	0	1	2	
TOTAL	19	3	43	40	16	5	55	26	15	3	27	126	
SEINES	32	30	31	32	30	30	27	59	35	34	30	185	

TL	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
0-19	0	0	5	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1	0	0	0
20-39	6	14	95	1	17	58	14	3	3	3	1	1	2	24	26	35	85	117	81	84	30
40-59	8	12	43	15	7	75	21	9	8	1	1	5	6	39	56	71	113	124	86	102	46
60-79	9	20	40	12	5	17	4	2	4	2	2	8	4	18	14	51	45	20	40	39	44
80-99	2	33	19	7	3	7	1	0	1	2	1	0	0	6	9	30	14	5	17	17	4
100-119	10	47	17	1	0	3	0	0	1	3	1	0	0	3	0	7	2	5	7	22	0
120-139	12	20	6	1	0	2	0	0	0	0	0	0	0	1	0	6	7	4	3	12	0
140-159	6	9	6	0	0	1	0	0	0	0	0	0	0	1	0	6	6	1	2	2	0
160-179	1	4	2	0	0	0	1	0	0	0	0	0	1	0	0	4	4	0	1	0	0
180-199	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	1	3	0	1	0	0
200-219	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
220-239	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
240-259	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
260-279	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
280-299	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
300-319	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
320-339	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
340-359	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
360-379	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
380-399	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
>400	0	3	3	1	4	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0
NO TL	3	4	4	1	0	309	4	0	0	0	0	1	0	59	50	15	194	60	3	71	2
TOTAL	57	169	243	39	39	474	48	15	18	11	6	15	13	153	156	228	473	337	241	349	126
SEINES	147	189	195	147	130	117	108	120	133	69	97	91	92	119	154	189	181	210	193	174	185

TABLE 30

2006 WLI ENVIRONMENTAL DATA

NORTH SHORE

		Air Temperature (deg. C)				Water Temperature (deg. C)				Salinity (ppt)				Dissolved Oxygen (mg/L)			
Month	Dates	Avg.	StDv.	Min	Max	Avg.	StDv.	Min	Max	Avg.	StDv.	Min	Max	Avg.	StDv.	Min	Max
May	10	14.8	1.44	14	17	13.7	0.42	12.9	14.1	15.1	0.23	14.8	15.3	12.13	2.28	9.09	15.70
	25	22.1	5.14	14	28.5	15.2	0.55	14.6	16.1	17.9	0.59	17.1	18.7	10.31	3.15	6.89	14.97
	Total	18.5	5.22	14	28.5	14.4	0.92	12.9	16.1	16.5	1.53	14.8	18.7	11.22	2.79	6.89	15.70
June	9	20.5	3.36	17	25	17.9	0.84	17.0	18.7	17.5	0.93	15.8	18.5	7.19	2.06	4.37	9.98
	22	25.1	1.24	23	26	20.0	1.05	19.2	21.8	18.8	0.44	18.3	19.3	9.84	3.21	5.18	12.88
	Total	22.6	3.46	17	26	18.9	1.43	17.0	21.8	18.1	0.98	15.8	19.3	8.39	2.86	4.37	12.88
July	11	29.3	1.57	27	31	20.3	0.54	19.5	20.9	17.7	2.11	14.5	19.6	7.90	0.79	7.02	9.14
	25	28.1	1.50	26	29												
	Total	28.6	1.58	26	31	20.3	0.54	19.5	20.9	17.7	2.11	14.5	19.6	7.90	0.79	7.02	9.14
Aug.	8	26.3	4.32	22	34	24.0	0.84	23.2	25.0	19.2	0.75	18.5	20.4	7.01	1.09	5.07	8.11
	30	21.3	2.42	19	25	22.1	0.68	20.9	22.9	18.5	0.48	17.6	19.0	4.17	2.08	0.40	6.57
	Total	23.8	4.24	19	34	23.0	1.23	20.9	25.0	18.9	0.70	17.6	20.4	5.59	2.17	0.40	8.11
Sep.	7	23.5	4.43	19	31	21.2	0.57	20.4	22.0	18.1	0.79	17.1	19.1	8.66	1.43	6.67	10.31
	25/26	20.3	2.07	18	24	19.3		19.3	19.3	11.0		11.0	11.0	10.02		10.02	10.02
	Total	21.9	3.69	18	31	20.9	0.89	19.3	22.0	17.0	2.76	11.0	19.1	8.86	1.40	6.67	10.31
Oct.	4	28.2	1.69	26	29.5												
	20	17.4	0.55	17	18	17.0	0.37	16.5	17.4	24.2	0.66	23.5	25.1	8.57	1.73	6.15	10.97
	Total	23.3	5.76	17	29.5	17.0	0.37	16.5	17.4	24.2	0.66	23.5	25.1	8.57	1.73	6.15	10.97

SOUTH SHORE

		Air Temperature (deg. C)				Water Temperature (deg. C)				Salinity (ppt)				Dissolved Oxygen (mg/L)			
Month	Dates	Avg.	StDv.	Min	Max	Avg.	StDv.	Min	Max	Avg.	StDv.	Min	Max	Avg.	StDv.	Min	Max
May	11	12.5	0.79	11.5	13.5	15.5	0.18	15.4	15.8	18.9	2.21	17.3	22.8	12.39	2.78	10.62	17.20
	24	18.8	2.02	15.5	21	16.1	1.26	14.3	17.3	20.5	0.68	19.5	21.1	11.70	1.00	10.87	13.25
	Total	15.7	3.62	11.5	21	15.8	0.89	14.3	17.3	19.7	1.74	17.3	22.8	12.05	2.00	10.62	17.20
June	8	17.2	0.67	16.5	18	19.4	0.16	19.2	19.6	17.8	0.66	16.8	18.6	7.64	2.59	4.97	10.79
	21	26.8	2.22	24	29	21.5	2.37	18.8	24.5	19.9	2.89	17.8	24.1	13.40	2.92	10.71	17.36
	Total	21.4	5.23	16.5	29	20.3	1.82	18.8	24.5	18.7	2.13	16.8	24.1	10.20	3.97	4.97	17.36
July	12	25.8	1.79	24	28	25.1	0.43	24.4	25.6	19.6	1.34	18.1	21.0	4.66	2.29	2.33	8.38
	26	25.0	1.41	24	27	25.3	0.64	24.5	25.9	21.2	2.49	17.7	23.4	8.65	2.18	6.24	10.91
	Total	25.4	1.58	24	28	25.2	0.51	24.4	25.9	20.3	1.98	17.7	23.4	6.43	2.97	2.33	10.91
Aug.	9	26.3	2.49	23	29	26.2	0.86	25.3	27.3	18.6	3.69	12.3	21.4	4.65	1.26	3.65	6.19
	25	23.6	0.42	23	24	24.5	0.27	24.1	24.8	21.5	1.80	19.5	24.0	6.72	1.73	4.69	9.45
	Total	25.0	2.20	23	29	25.4	1.09	24.1	27.3	20.1	3.12	12.3	24.0	5.68	1.80	3.65	9.45
Sep.	6	20.6	2.41	18	23.5	21.3	0.73	20.7	22.5	17.1	2.15	13.3	18.3	7.02	0.46	6.29	7.49
	28	22.7	2.51	20.5	27	19.6	0.68	18.8	20.6	18.0	1.22	16.3	19.4	9.42	1.64	7.97	12.15
	Total	21.7	2.57	18	27	20.5	1.13	18.8	22.5	17.6	1.71	13.3	19.4	8.22	1.70	6.29	12.15
Oct.	3	19.9	2.84	17	24	18.9	0.80	17.6	19.7	17.1	1.62	14.3	18.4	10.02	1.17	8.92	11.79
	19	19.4	2.07	18	23	15.9	0.13	15.8	16.1	26.4	1.10	24.8	27.3	8.90	0.45	8.28	9.36
	Total	19.7	2.36	17	24	17.6	1.68	15.8	19.7	21.2	5.08	14.3	27.3	9.52	1.05	8.28	11.79

TABLE 31 WLI ENVIRONMENTAL DATA, 1986 - 2006

Mean Air Temperature (deg. C)

North Shore

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May	15.3	21.1	27.6	15.4	12.8	22.3	16.1	23.6	14.7	21.9	15.8	15.4	15.8	15.0	22.0	19.1	20.4	19.0	19.2	17.2	17.9	15.2	18.5	18.1
June	24.0		23.8	23.0	22.9	25.3	17.6	23.9	19.2	20.9	21.6	19.9	18.6	20.2	26.8	19.4	22.8	21.3	21.8	19.2	21.8	23.5	22.6	21.8
July	24.0		27.4	23.9	30.1	26.1	21.8	23.2	20.9	24.2	28.6	23.2	21.9	26.8	25.8	24.4	24.5	27.0	24.9	24.4	24.5	26.7	28.6	24.9
Aug.	26.7	23.5	26.0	21.7	32.3	23.9	21.3	22.7	25.3	26.0	21.9	23.9	26.3	17.6	27.7	21.5	23.4	28.7	23.5	26.9	24.5	25.7	23.8	24.7
Sep.				17.7	22.3	16.8	21.5		23.9		21.7		27.3	22.1	21.3			22.7	23.3	19.8	20.8	24.0	21.9	22.3
Oct.				18.0	9.0	14.6			16.7		10.3		14.6	14.6	15.6	16.6	17.5	12.8	10.4	15.7	12.7	17.8	23.3	15.3
6-mo. Avg	22.1	21.6	26.7	20.3	19.7	21.6	18.9	23.4	19.1	22.8	19.9	19.8	18.9	19.5	22.7	20.0	21.5	21.8	21.2	20.5	20.5	22.9	23.0	21.1

South Shore

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May	21.0	19.6	17.7	16.1	19.0	15.9	17.8	19.6	16.6	16.3	15.2		15.1	14.4	16.9	15.9	19.4	20.1	15.6	11.8	15.0	17.0	15.7	17.0
June	26.7		25.5	26.6	20.2	27.2	19.0	24.5	20.1	21.7	24.6	22.9	18.8	20.9	23.4	22.9	23.2	25.8	26.3	23.5	22.3	22.7	21.4	23.3
July		24.0	23.8	24.7	34.0	23.2	18.8	24.5	21.0	29.7	29.9	25.1	26.8	24.0	23.4	29.4	24.3	23.8	25.8	25.3	21.1	24.7	25.4	25.2
Aug.	28.0		25.0	27.1		25.7	22.0	27.4	20.1	25.3	24.6	26.4	22.0	24.8	30.8	26.1	23.3	29.1	27.8	26.2	24.0	26.8	25.0	25.9
Sep.				25.4	20.5	24.5	23.3	16.6			23.1		23.8	23.4	22.3		16.3	23.0	22.0	22.0	20.4	24.0	21.7	22.1
Oct.			18.6	20.1		16.5	20.2		15.6		16.8		16.2	21.2	14.9	17.2	16.3	15.2	13.2	12.2	14.6	18.7	19.7	16.6
6-mo. Avg	25.6	21.2	21.9	22.6	20.7	21.2	19.4	23.1	18.8	23.0	22.5	24.7	19.3	21.7	21.3	22.2	20.7	23.2	21.9	20.4	18.9	23.1	21.5	21.7

Mean Water Temperature (deg. C)

North Shore

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May	12.2	16.5	18.0	14.9	12.1	14.8	13.1	17.5	13.4	16.7	14.6	9.9	15.0	14.8	15.8	15.5	15.2	14.1	15.6	12.9	14.0	13.6	14.4	14.7
June	18.9		22.4	19.2	19.2	20.5	17.4	20.8	17.2	17.9	17.6	18.6	17.9	17.2	18.7	20.3	19.1	18.8	20.3	17.4	18.6	19.4	18.9	18.8
July	20.9		22.5	22.5	24.6	20.6	21.4	23.1	21.6	22.7	25.1	22.8	20.7	19.2	20.5	23.2	21.6	22.6	23.2	21.4	20.6	23.0	20.3	22.1
Aug.	24.2	24.0	24.0	21.8	24.3	21.2	21.6	23.1	22.3	23.9	23.0	23.0	23.0	22.7	24.4	23.4	22.8	24.5	23.9	23.3	23.1	24.0	23.0	23.2
Sep.				19.7	18.7	16.5	17.3		23.1		22.3		24.7	22.0	23.8		23.5	22.1	22.4	21.2	22.8	23.0	20.9	21.9
Oct.				16.5	11.9	13.8			16.2		12.3		15.6	15.5	17.8	15.3	16.2	15.4	15.7	15.6	16.3	18.5	17.0	15.7
6-mo. Avg	18.6	18.3	20.4	19.2	17.1	17.8	17.5	20.0	17.9	19.9	18.7	17.5	17.9	18.1	19.7	18.2	18.8	19.9	20.3	18.5	18.9	21.0	19.0	18.9

South Shore

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May	17.1	16.4	16.9	13.7	14.7	14.9	15.6	17.3	15.9	17.9	16.6		15.1	14.3	14.9	15.9	17.1	18.1	16.2	14.5	16.0	15.6	15.8	16.0
June	22.2		21.7	24.9	19.8	23.1	20.2	23.5	19.4	20.1	21.7	21.3	23.0	17.9	21.6	22.2	19.8	25.6	23.1	19.8	21.3	21.4	20.3	21.3
July		25.8	25.8	24.9	24.0	23.0	23.0	23.9	23.0	25.6	28.0	24.1	24.1	23.9	24.9	28.0	24.3	25.2	24.7	24.2	23.7	25.3	25.2	24.9
Aug.	25.8		26.8	24.9		23.3	23.9	24.9	23.4	25.7	24.4	25.7	23.0	23.8	27.2	25.5	23.5	26.5	26.6	25.6	24.2	26.4	25.4	25.2
Sep.				22.7	18.5	24.0	22.5	22.4			23.5		24.7	22.6	23.4		20.1	22.9	22.7	21.3	22.5	23.9	20.5	22.2
Oct.			17.9	15.6		15.5	17.6		15.4		16.9		15.6	19.7	17.0	20.5	16.6	15.3	16.4	14.8	18.3	18.3	17.6	17.0
6-mo. Avg	21.9	19.8	21.1	20.8	18.2	19.6	19.1	22.2	19.3	21.8	21.9	23.3	19.0	20.2	21.3	21.7	20.0	22.2	21.3	20.2	20.7	22.7	20.8	20.9

Mean Salinity (ppt)

North Shore

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May		21.8	19.2	24.8	27.8	29.3	23.2	20.0	26.2	22.6	23.4	25.4	23.2	22.7	21.5	23.6	23.9	24.3	25.2	22.8	23.4	21.7	16.5	23.2
June			20.8	29.8	29.9	29.9	22.5	19.3	26.6	25.1	25.5	24.7	24.6	22.8	23.4	24.6	23.6	23.8	24.6	21.7	23.3	21.9	18.1	24.2
July			22.4	27.1	28.1	28.9	25.4	22.3	25.3	25.9	24.8	24.3	23.5	24.8	23.2	24.7	24.7	23.8	25.2	22.9	23.6	21.9	17.7	24.4
Aug.		11.8	21.8	27.8	28.6	29.1	20.9	26.1	22.6	25.1	27.0	26.3	22.7	27.2	25.0	26.0	24.8	24.8	25.4	23.7	23.6	22.3	18.9	24.2
Sep.				28.0	30.1	24.4	29.3		25.8		24.2		24.3	22.6	25.1		24.9	25.7	25.4	24.0	21.9	20.4	17.0	23.9
Oct.				29.3	29.6	26.7			26.9		17.3		25.6	22.9	24.8	24.8	25.4	25.4	24.7	23.1	23.0	16.6	24.2	24.2
6-mo. Avg		19.5	20.5	27.1	28.9	28.4	23.7	21.2	25.8	24.8	23.7	25.1	23.8	23.3	23.9	24.3	24.6	24.7	24.9	22.8	23.3	20.7	18.3	24.0

South Shore

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May		23.8	19.2	26.3	29.2	29.1	25.5	22.5	27.7	24.3	26.5		25.3	24.2	23.6	25.7	24.7	25.5	25.3	24.5	23.9	22.0	19.7	25
June			24.2	29.1	29.7	28.7	23.4	21.7	27.6	25.1	26.7	25.3	26.0	25.2	23.8	26.5	25.1	24.7	24.8	21.0	24.7	22.2	18.7	25
July		13.3	18.8	29.1	29.8	28.5	26.5	22.0	25.4	28.5	26.9	25.0	24.2	28.2	24.3	27.4	26.5	23.3	27.5	23.7	22.5	22.5	20.3	24.7
Aug.			21.5	28.3		29.5	28.6	26.6	22.9	26.3	23.7	27.1	26.0	26.4	26.0	27.7	25.2	24.9	27.7	24.7	21.6	22.8	20.1	25
Sep.				29.3	29.4	28.8		27.2			28.6		25.3	25.0	26.9		25.8	27.9	25.8	25.1	23.0	22.8	17.6	25.8
Oct.			29.4	29.2		27.1	26.0		28.9		29.0		24.5	24.8	25.3	24.8	27.4	26.7	26.3	25.3	22.3	17.1	21.2	25.1
6-mo. Avg		20.0	22.6	28.3	29.5	28.7	25.7	23.1	26.8	25.9	26.8	25.7	25.0	25.6	25.2	26.4	25.8	25.6	26.1	23.9	23.0	21.6	19.6	25.1

Mean Dissolved Oxygen (mg/L)

North Shore

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May		9.20		7.76	10.93	9.05	10.37	10.85	10.19		12.10	7.74	6.66		11.06	9.91	9.22	11.17	7.30	4.99	7.90	1.83	11.22	9.24
June				8.24	10.55	7.18	6.85	7.58	8.03	10.47	8.19	6.53	8.44		9.71	7.31	7.41	9.45	7.91	11.36	8.47	7.18	8.39	8.59
July				7.86	9.83	7.94	7.32	8.13	4.20	11.17	8.78	6.08	4.57		8.40	6.73	7.81	9.53	6.05	6.86	7.86	8.91	7.90	7.92
Aug.				6.98	12.90	6.75	6.86	7.90	6.80	7.96	7.50	7.63			9.78	5.10	6.30	8.98	5.89	7.30	9.05	7.17	5.59	7.41
Sep.				8.53	10.60	7.75	10.15		5.66		7.75				4.94		9.18	6.20	6.85	7.77	8.51	6.41	8.86	7.32
Oct.				6.70	8.11	7.40			10.60		7.36					3.94	8.47	4.89	6.29	7.36	7.12	7.03	8.57	7.19
6-mo. Avg		9.20		7.70	10.30	7.66	8.39	9.06	8.17	10.25	9.36	6.86	6.85		8.97	7.76	8.07	7.97	7.11	8.15	8.07	6.80	8.43	8.17

South Shore

	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May		9.90		7.94	8.22	10.06	7.00	7.90	8.34	7.96	8.29		4.42		7.24	7.18	8.67	9.27	5.96	8.34	5.44	6.85	12.05	7.90
June				7.49	10.77	7.28	6.53	7.79	6.05	7.37	8.14	6.53	4.50		9.22	6.78	7.35	6.75	5.38	11.39	5.20	8.18	10.20	7.62
July				6.73	10.30	6.93	5.60	5.52	5.57	8.30	8.29	5.63	4.53		7.98	7.70	7.62	9.44	6.46	6.13	4.05	5.68	6.43	6.66
Aug.				5.34		5.67	4.26	8.03	5.69	5.83	7.83	5.58			5.68	4.16	4.48	6.74	4.77	6.19	7.20	7.84	5.68	6.04
Sep.				6.11	9.51	7.20	7.25	5.56			7.00				6.64		3.95	4.87	5.39	7.77	5.95	5.92	8.22	6.72
Oct.				6.72		7.90	8.72		7.83		6.02					3.63	6.50	10.00	6.75	7.52	6.47	7.82	9.52	7.29
6-mo. Avg		9.90		6.73	9.61	8.25	6.55	6.89	6.60	7.47	7.78	6.05	4.45		7.53	6.22	6.74	8.04	5.71	7.82	5.75	7.13	8.68	7.13

TABLE 32 WLI PHYSICAL DATA FOR 1 METER OFF BOTTOM, 1998 - 2006

North Shore

Mean Temperature (deg. C)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May		14.2	13.3	13.3	14.6	11.5	11.7	10.9	13.2	13.1
June	17.3	19.3	18.2	16.6	17.8	15.0	16.7	16.7	17.2	17.1
July	19.5	21.5	19.8	18.5	23.9	18.2	20.2	20.9	17.9	20.0
Aug.	22.6	22.7	22.9	22.7	23.6	21.0	22.3	23.2	22.0	22.5
Sep.	23.6		22.5	22.1	22.0	21.2	22.7	22.8	20.8	22.4
Oct.		15.7	16.6	16.8	16.5	16.2	17.1	18.8	17.2	16.8
6-mo Avg	20.9	18.2	18.1	18.2	19.3	17.2	18.0	19.7	17.8	18.5

Mean Salinity (ppt)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May		24.1	24.8	24.5	26.0	23.6	23.9	22.2	16.8	23.4
June	23.4	25.1	23.8	24.6	25.4	23.0	24.0	22.5	18.8	23.5
July	24.0	26.1	25.7	25.7	25.8	24.0	24.6	22.8	18.9	24.8
Aug.	25.5	26.6	25.1	25.7	25.9	24.7	24.5	22.6	18.7	24.4
Sep.	25.8		25.5	26.5	26.1	24.8	23.3	20.9	18.6	24.2
Oct.		25.5	26.1	26.4	25.4	24.7	23.6	17.2	25.7	24.4
6-mo Avg	24.8	25.4	25.3	25.5	25.8	24.1	24.0	21.1	19.1	24.1

Mean Dissolved Oxygen (mg/L)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May		8.81	7.64	8.43	4.44	4.82	6.87	3.22	9.52	7.32
June	6.89	7.07	6.96	6.83	4.17	6.99	5.37	6.09	6.87	6.43
July	5.84	4.38	5.12	5.02	5.40	4.00	4.38	5.37	4.66	4.80
Aug.	3.95	3.54	6.08	4.82	4.40	2.57	4.65	6.68	4.43	4.36
Sep.	3.07		3.32	5.01	6.40	6.29	5.34	6.00	6.07	5.15
Oct.		3.84	6.17	4.73	5.95	6.69	7.53	7.37	7.09	6.10
6-mo Avg	4.81	5.85	6.00	5.82	5.17	5.13	5.87	6.02	6.60	5.71

South Shore

Mean Temperature (deg. C)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May		14.5	15.7	16.9	15.4	14.4	15.2	14.6	15.1	15.4
June	19.5	21.3	18.7	24.0	22.1	17.8	20.4	20.9	19.9	20.5
July	23.1	26.3	23.4	24.4	24.2	23.5	23.7	24.2	24.5	24.3
Aug.	25.0	24.0	23.4	25.6	24.8	24.7	24.0	25.6	25.3	24.7
Sep.	25.8		20.4	23.1	22.2	21.6	22.8	23.9	20.5	22.2
Oct.		19.9	15.3	15.1	17.4	14.9	19.1	18.5	17.5	17.2
6-mo Avg	22.8	20.9	19.4	21.2	20.1	19.6	20.5	22.1	20.4	20.5

Mean Salinity (ppt)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May		26.5	26.8	26.7	26.2	25.7	25.9	22.9	19.6	25.5
June	25.0	27.5	25.8	26.0	26.0	23.9	25.7	23.8	20.1	25.0
July	25.4	28.1	27.6	26.6	28.0	25.2	26.1	24.5	21.6	26.0
Aug.	27.3	28.1	26.4	28.0	28.1	26.0	25.0	24.1	21.7	25.9
Sep.	27.4		26.4	28.6	27.1	26.5	23.7	23.7	18.7	24.9
Oct.		26.8	28.4	28.0	26.7	26.3	23.3	18.2	23.0	25.1
6-mo Avg	26.0	27.4	27.0	27.3	26.9	25.4	25.0	23.0	20.8	25.5

Mean Dissolved Oxygen (mg/L)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVG
May		5.83	7.17	6.69	4.62	7.58	4.48	5.77	10.34	6.46
June	3.77	5.59	5.54	2.33	3.75	4.40	4.11	5.68	3.79	4.64
July	5.03	2.98	4.78	4.42	3.54	3.73	3.37	3.38	3.59	3.78
Aug.	1.00	2.73	3.20	3.41	1.85	3.67	4.95	3.40	3.54	3.34
Sep.	3.03		2.96	2.89	4.33	5.03	5.49	4.36	6.10	4.37
Oct.		3.10	5.46	8.23	6.88	6.55	6.20	6.99	8.28	6.39
6-mo Avg	3.40	4.37	5.11	4.80	4.36	5.02	4.76	4.77	5.94	4.88

FIGURE 1 LONG ISLAND BEACH SEINE SURVEY AREAS

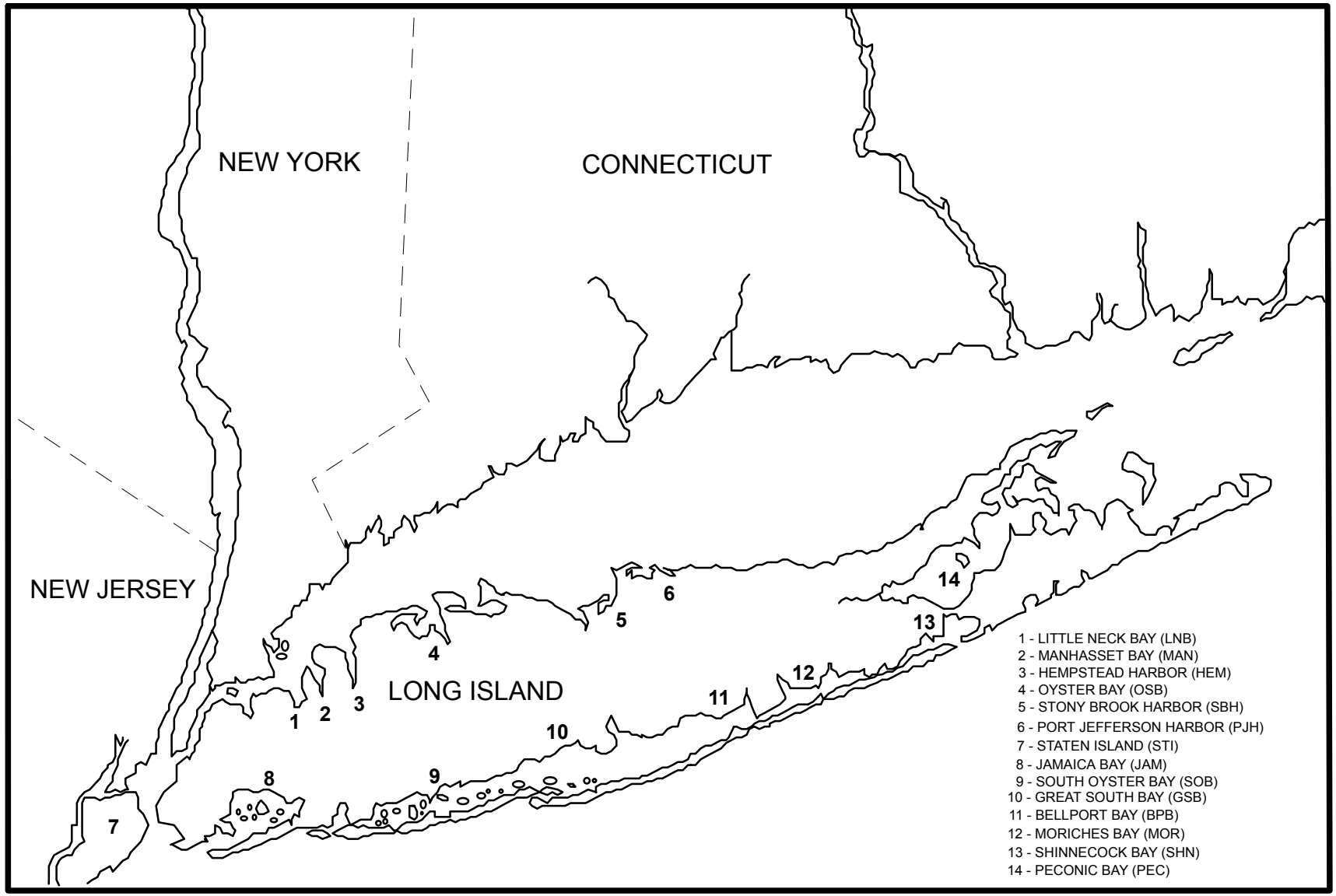
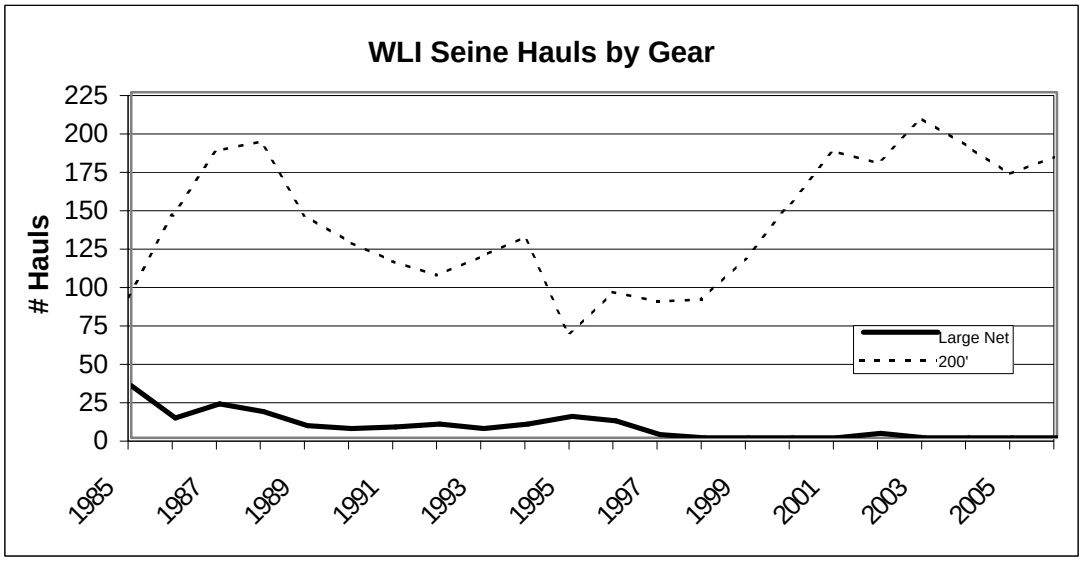


FIGURE 2


WLI Seine Hauls by Gear
Hauls
225
200
175
150
125
100
75
50
25
0
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
Large Net
'200'

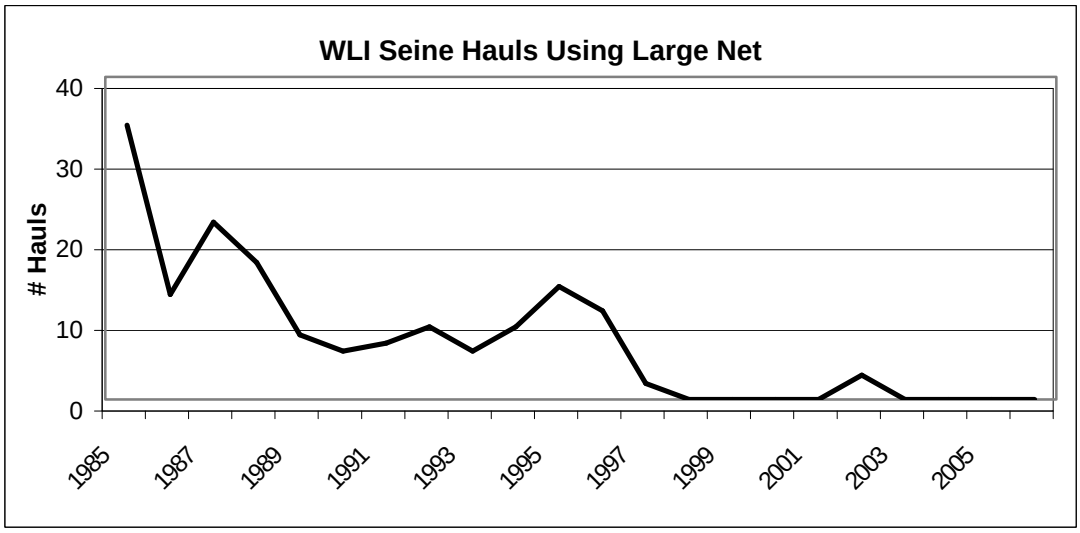
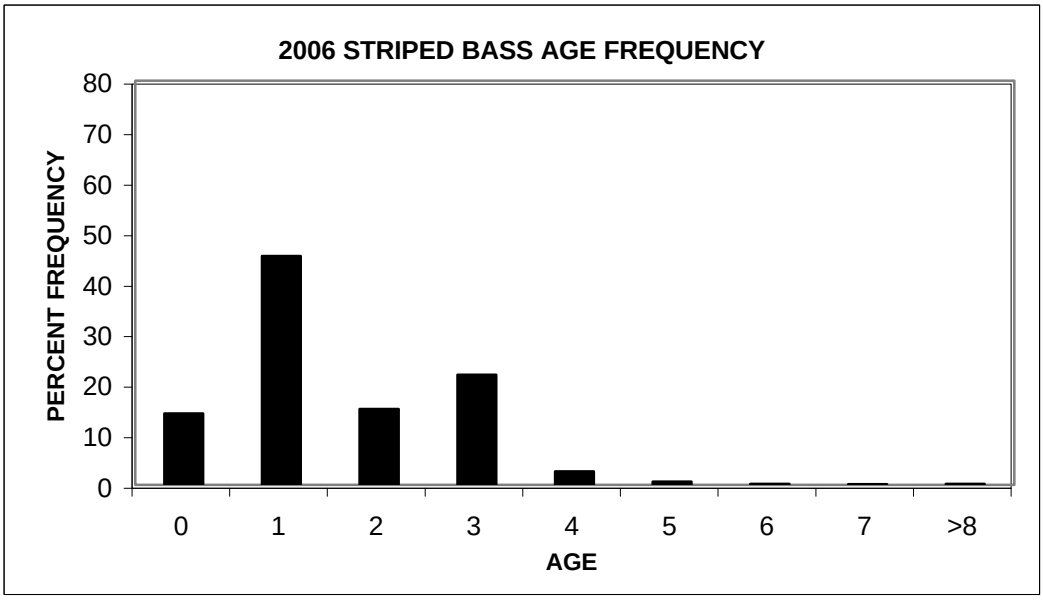

WLI Seine Hauls Using Large Net
Hauls
40
30
20
10
0
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005

FIGURE 3


2006 STRIPED BASS AGE FREQUENCY
PERCENT FREQUENCY
80
70
60
50
40
30
20
10
0
0
1
2
3
4
5
6
7
>8
AGE

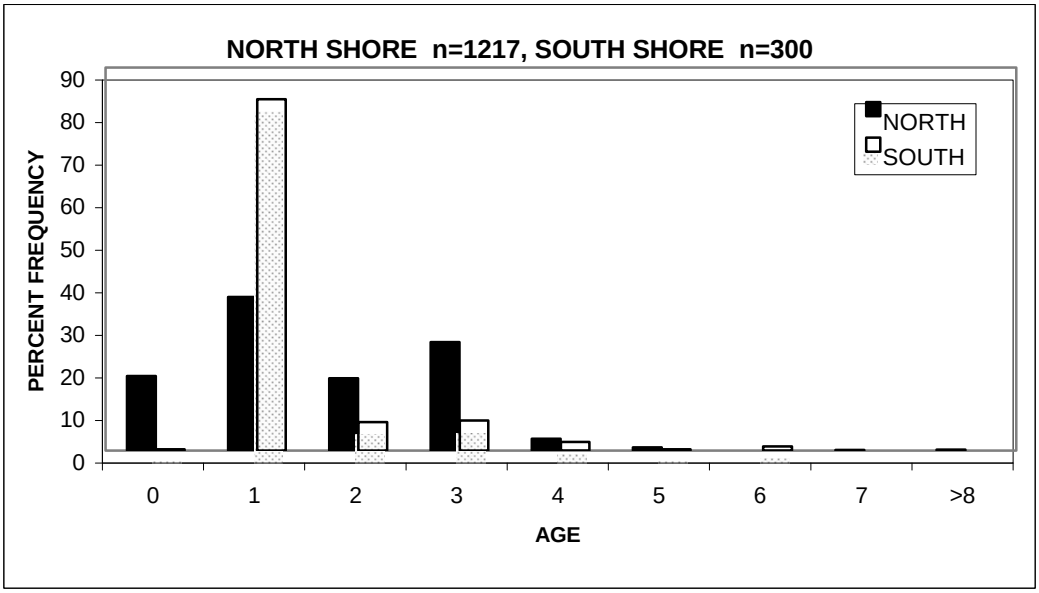
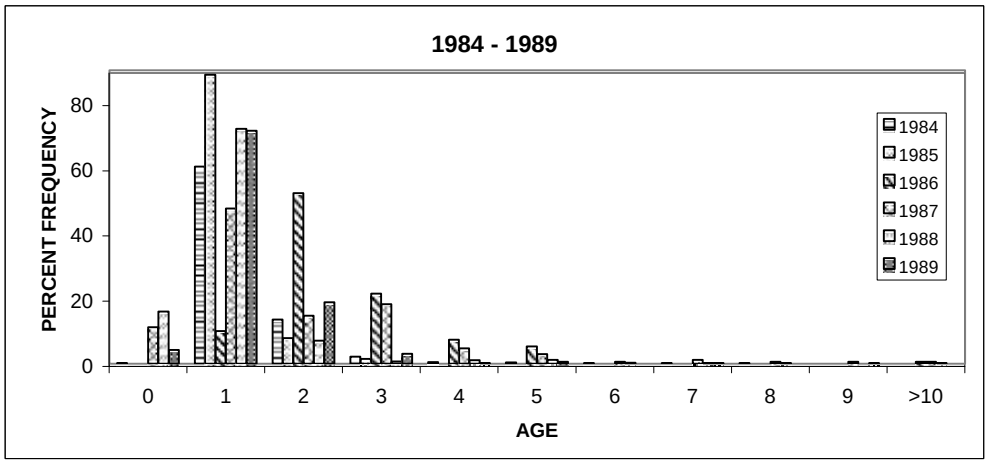
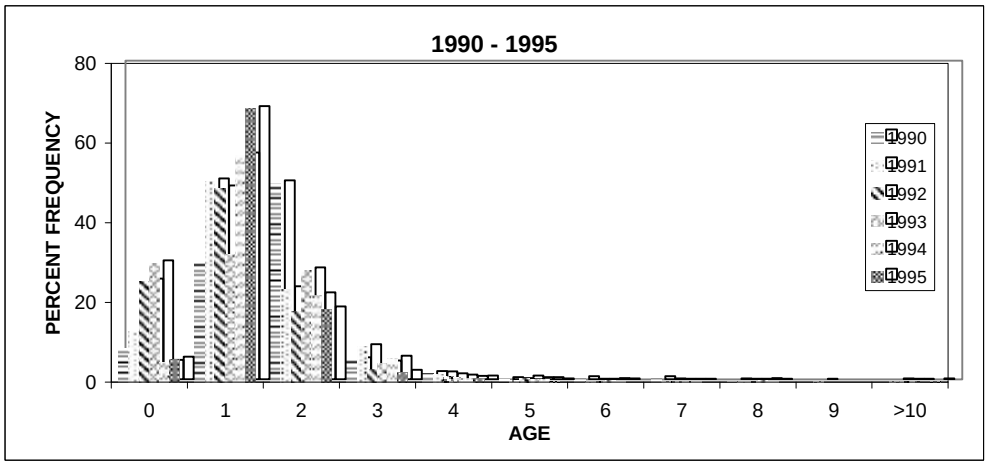

NORTH SHORE n=1217, SOUTH SHORE n=300
PERCENT FREQUENCY
90
80
70
60
50
40
30
20
10
0
NORTH
SOUTH
0
1
2
3
4
5
6
7
>8
AGE

FIGURE 4 COMPARISON OF WLI STRIPED BASS AGE FREQUENCIES





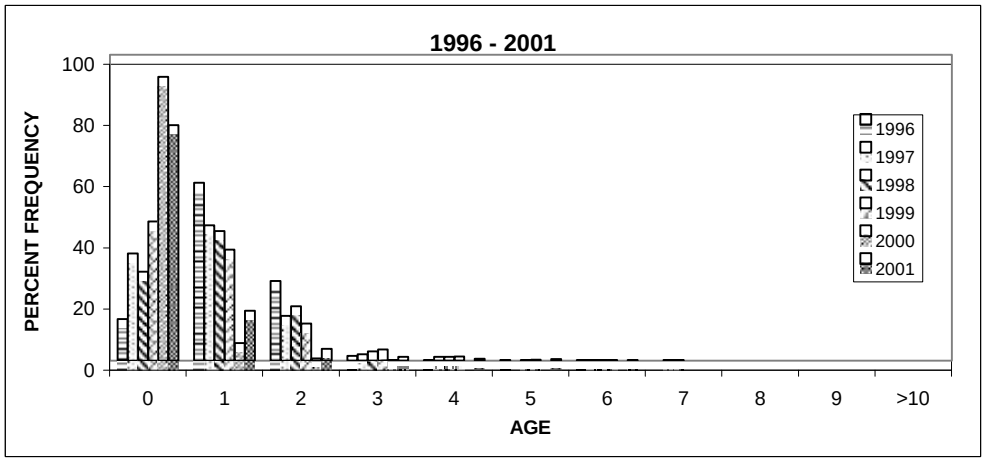
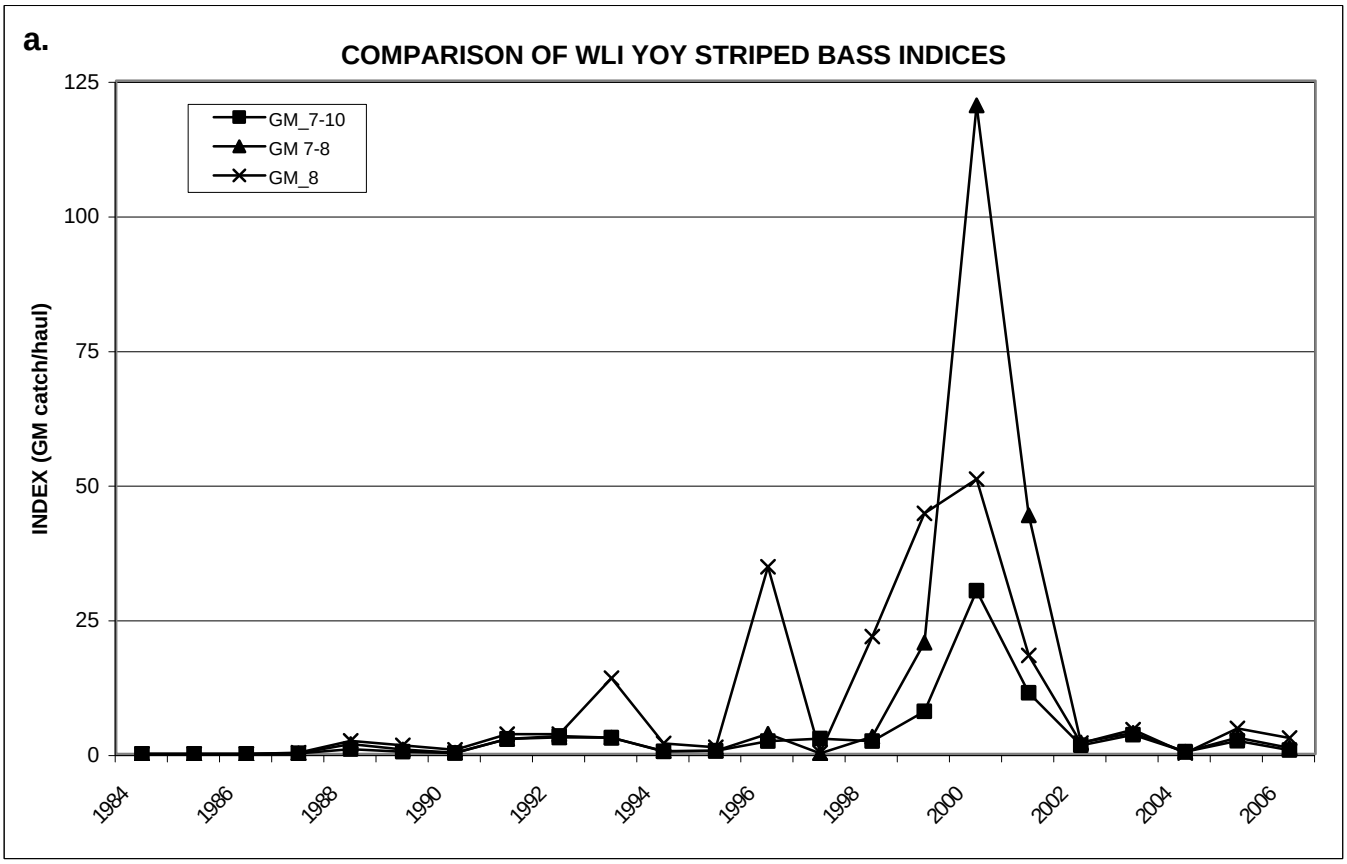


FIGURE 5


a.
COMPARISON OF WLI YOY STRIPED BASS INDICES
INDEX (GM catch/haul)
GM_7-10
GM 7-8
GM_8
125
100
75
50
25
0
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006

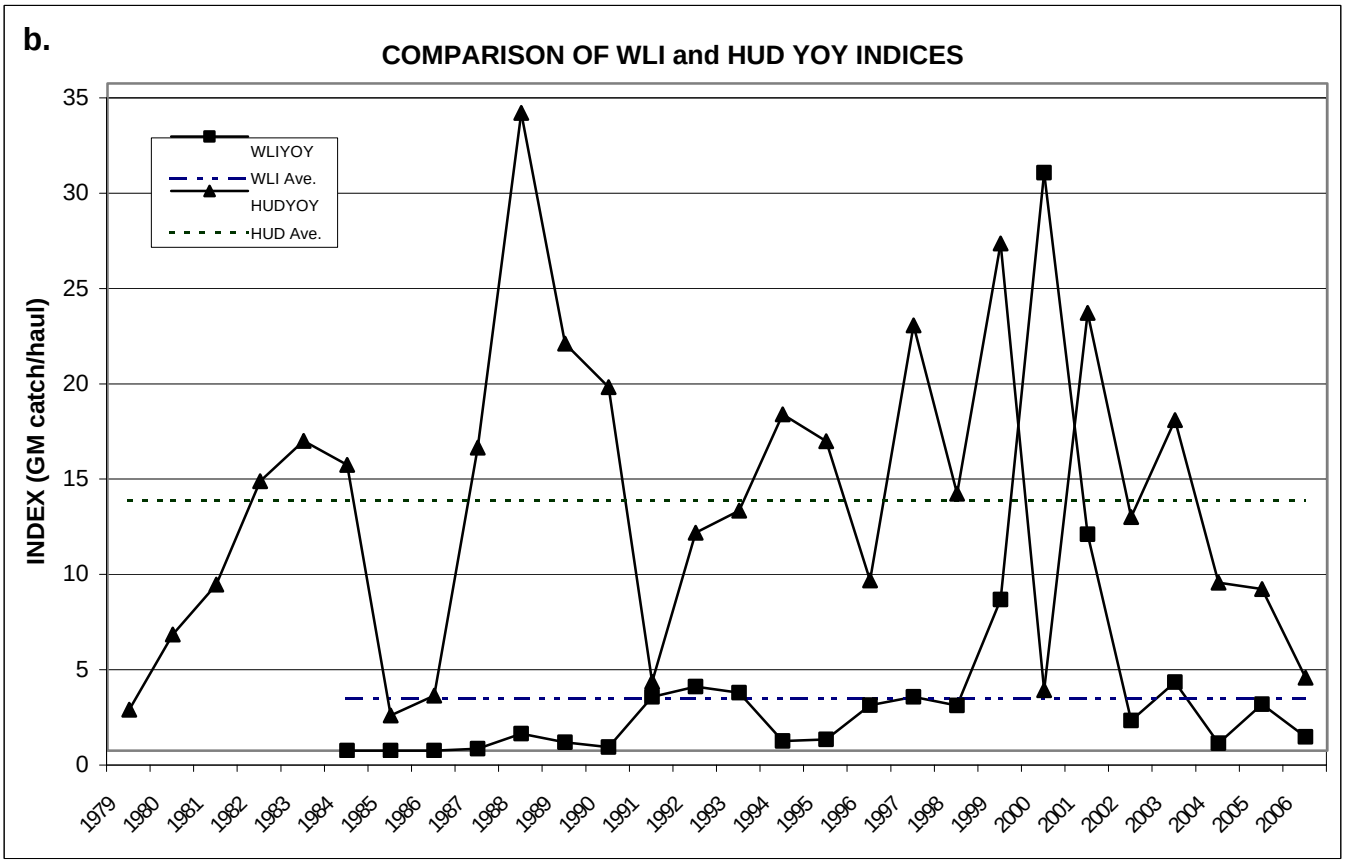
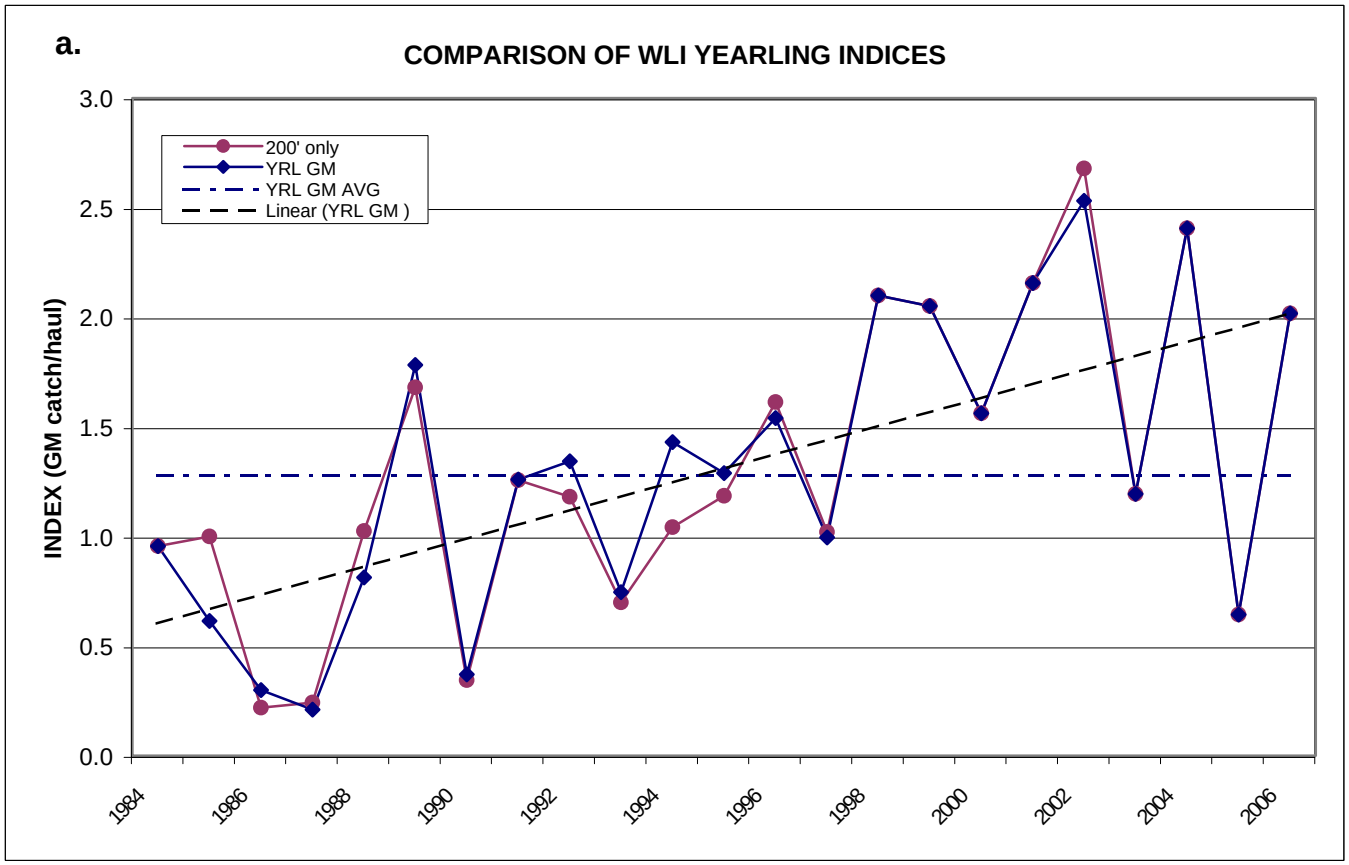

b.
COMPARISON OF WLI and HUD YOY INDICES
INDEX (GM catch/haul)
WLIYOY
WLI Ave.
HUDYOY
HUD Ave.
35
30
25
20
15
10
5
0
1979
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006

FIGURE 6


a.
COMPARISON OF WLI YEARLING INDICES
INDEX (GM catch/haul)
200' only
YRL GM
YRL GM AVG
Linear (YRL GM)
3.0
2.5
2.0
1.5
1.0
0.5
0.0
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006

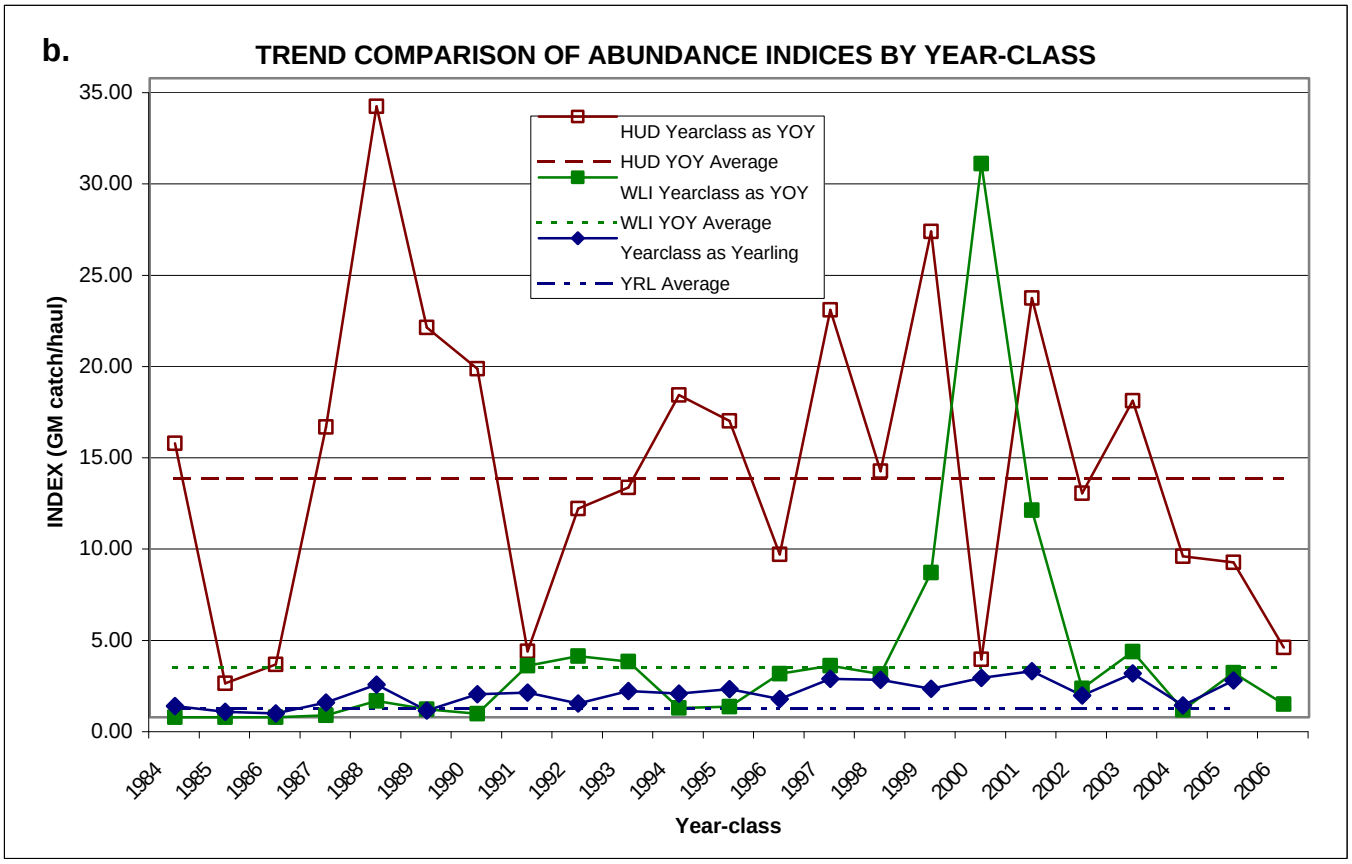
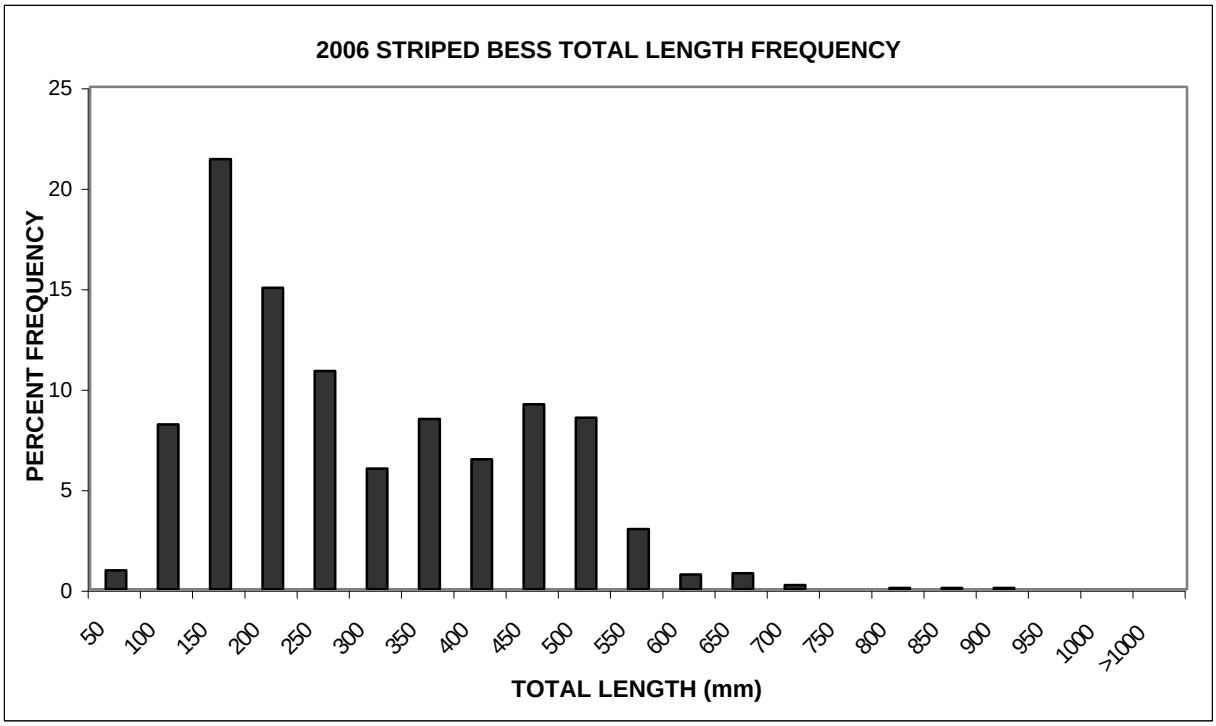

b.
TREND COMPARISON OF ABUNDANCE INDICES BY YEAR-CLASS
INDEX (GM catch/haul)
HUD Yearclass as YOY
HUD YOY Average
WLI Yearclass as YOY
WLI YOY Average
Yearclass as Yearling
YRL Average
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
Year-class

FIGURE 7


2006 STRIPED BESS TOTAL LENGTH FREQUENCY
PERCENT FREQUENCY
0
5
10
15
20
25
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
>1000
TOTAL LENGTH (mm)

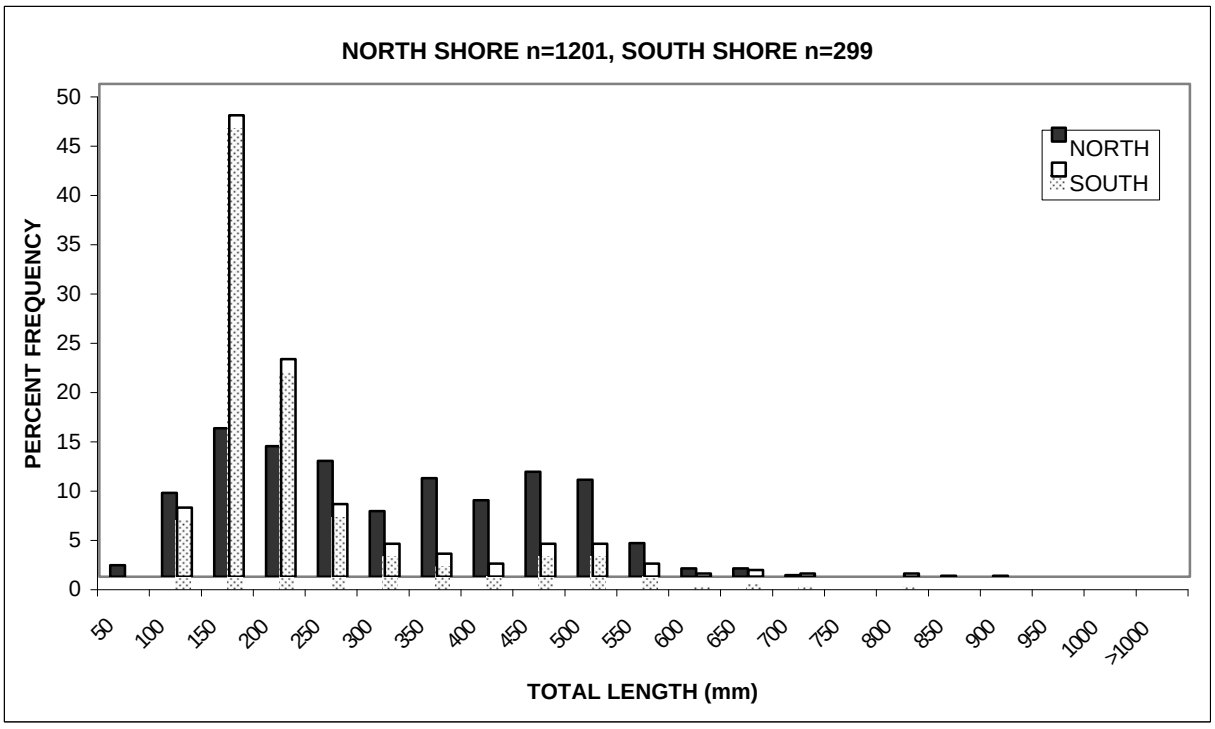
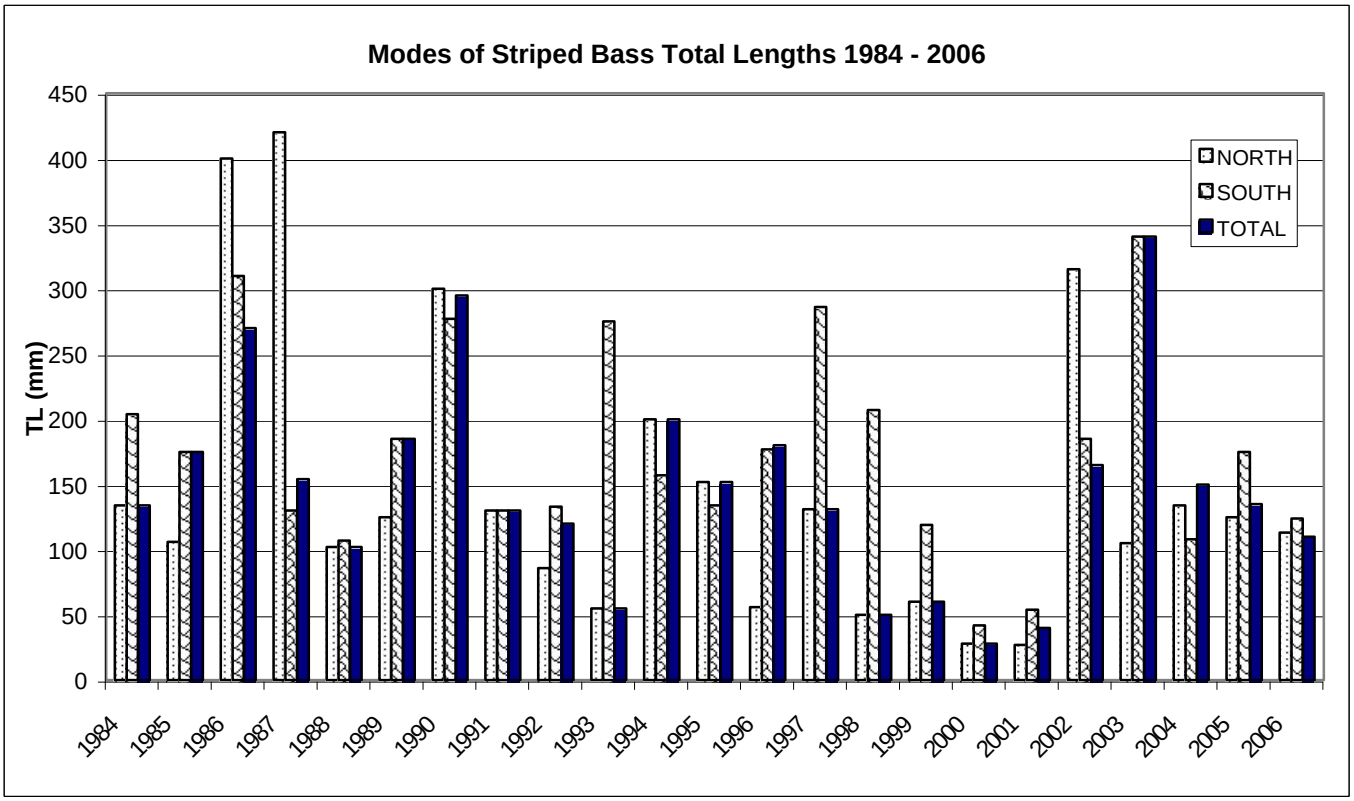

NORTH SHORE n=1201, SOUTH SHORE n=299
PERCENT FREQUENCY
0
5
10
15
20
25
30
35
40
45
50
NORTH
SOUTH
50
100
150
200
250
300
350
400
450
500
550
600
650
700
750
800
850
900
950
1000
>1000
TOTAL LENGTH (mm)

FIGURE 8


Modes of Striped Bass Total Lengths 1984 - 2006
TL (mm)
NORTH
SOUTH
TOTAL
0
50
100
150
200
250
300
350
400
450
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006

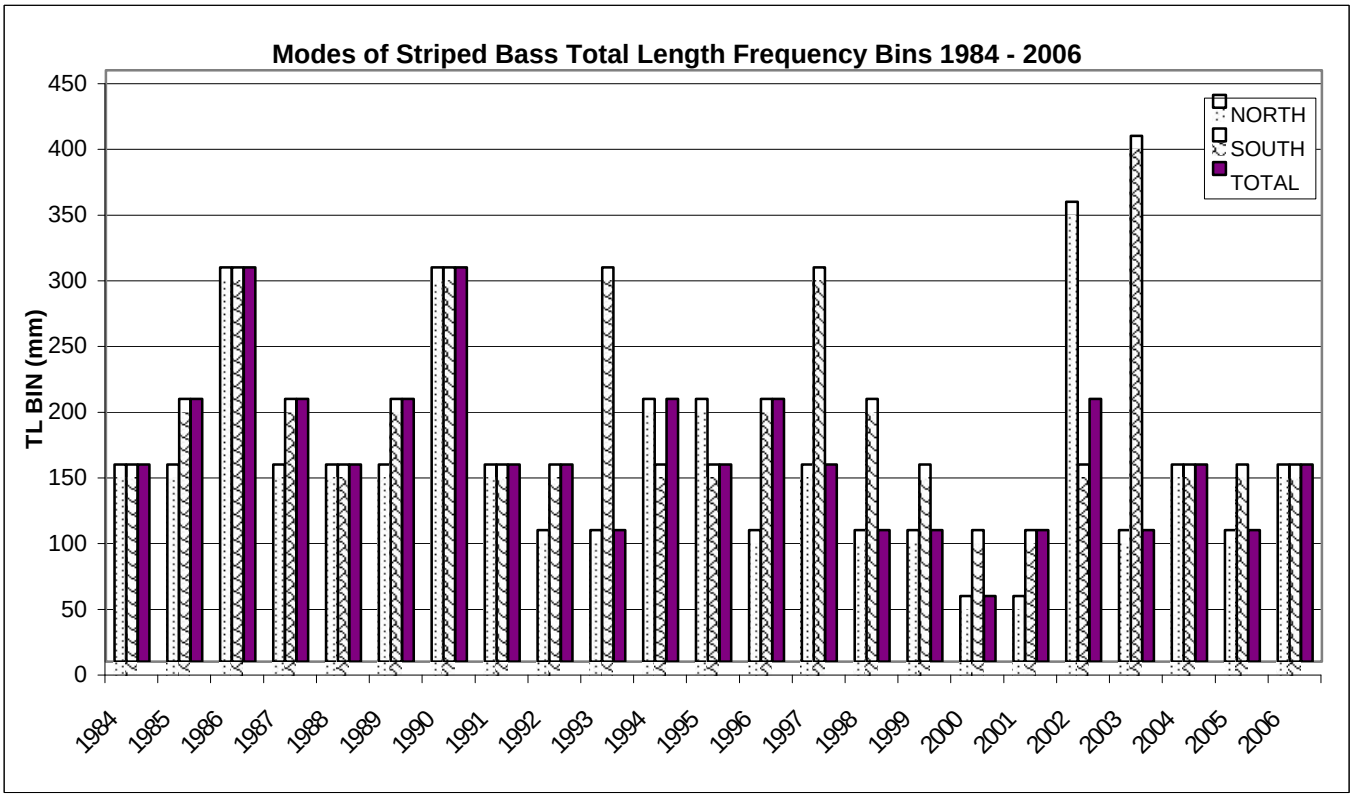

Modes of Striped Bass Total Length Frequency Bins 1984 - 2006
TL BIN (mm)
NORTH
SOUTH
TOTAL
0
50
100
150
200
250
300
350
400
450
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006

FIGURE 9

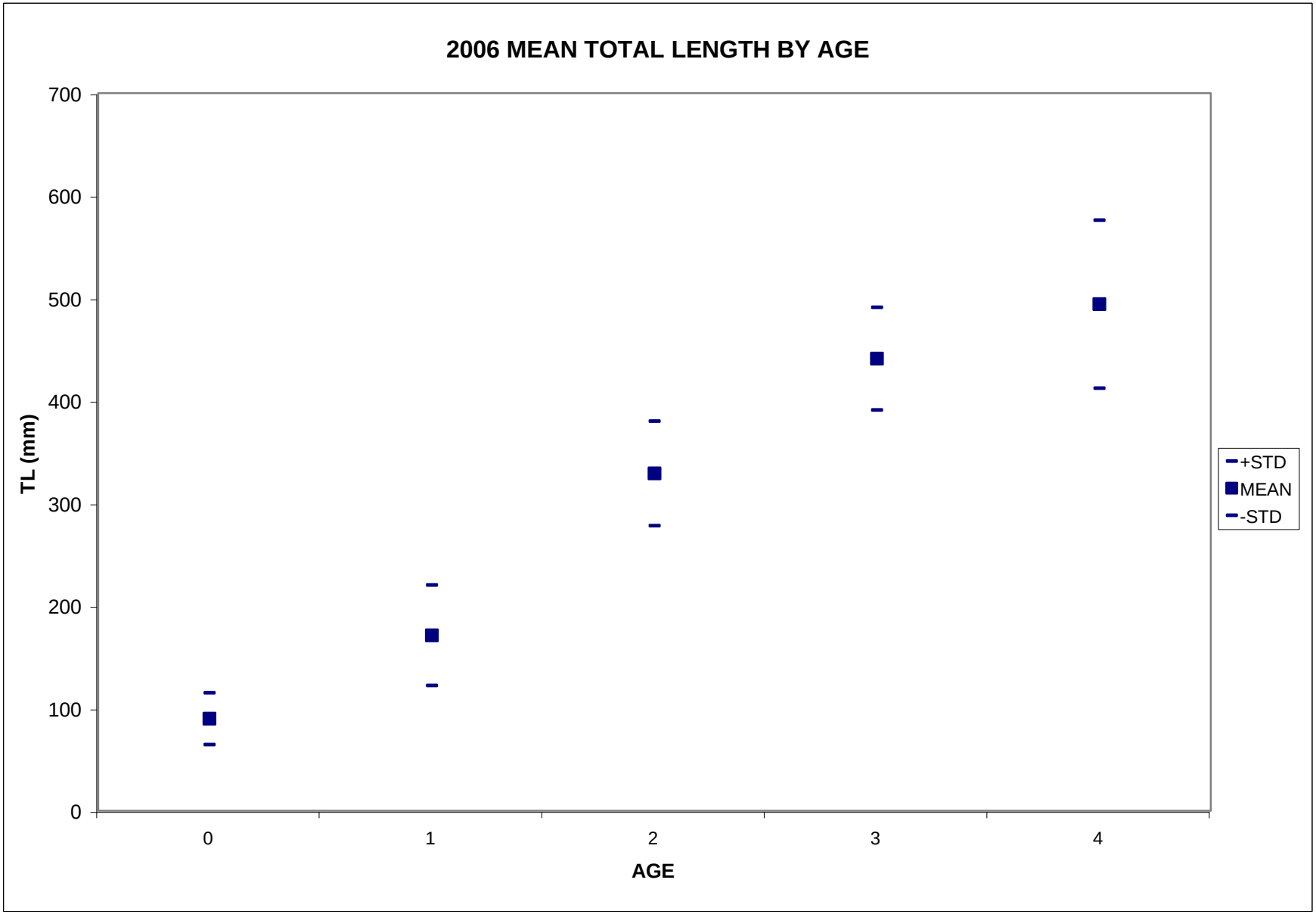
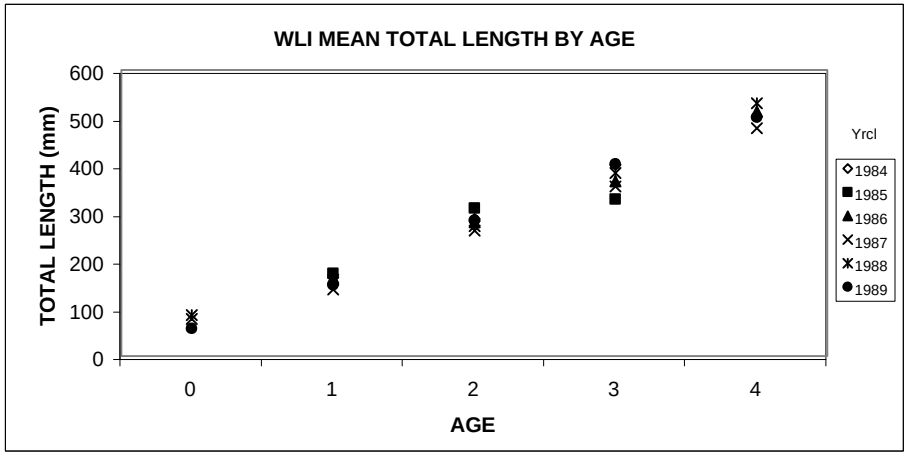
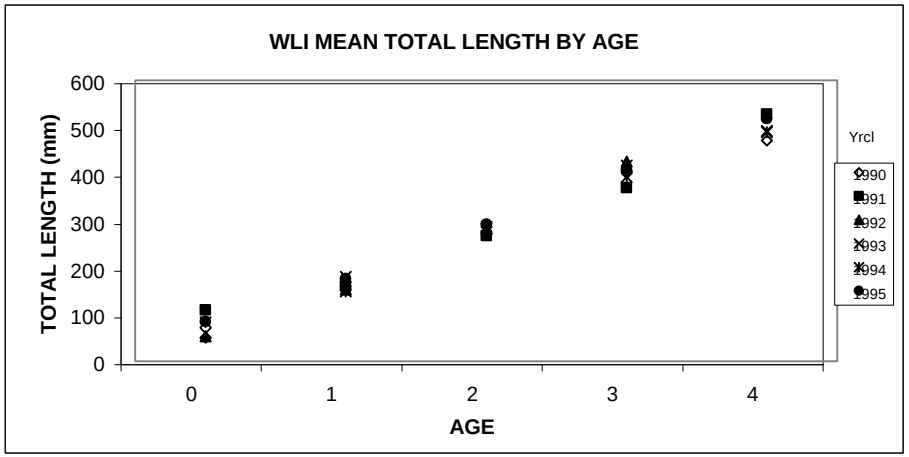
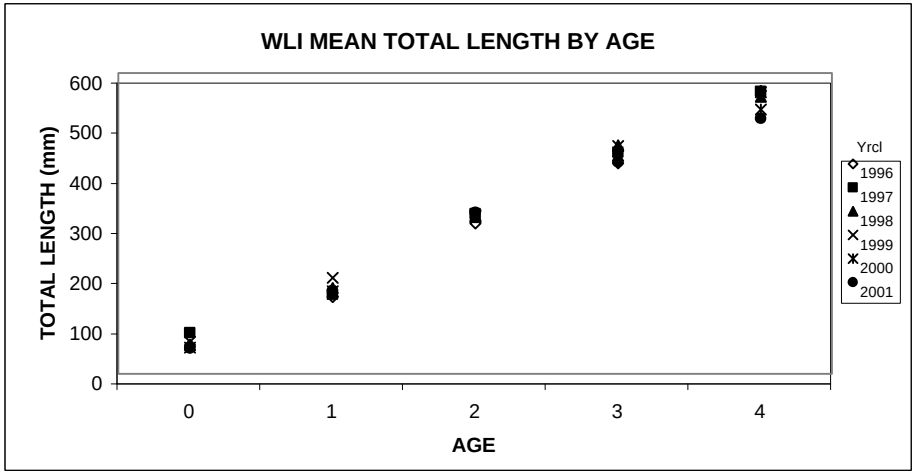

2006 MEAN TOTAL LENGTH BY AGE
700
600
500
400
300
200
100
0
TL (mm)
0
1
2
3
4
AGE
+STD
MEAN
-STD

FIGURE 10


WLI MEAN TOTAL LENGTH BY AGE
TOTAL LENGTH (mm)
600
500
400
300
200
100
0
0
1
2
3
4
AGE
Yrcl
1984
1985
1986
1987
1988
1989


WLI MEAN TOTAL LENGTH BY AGE
TOTAL LENGTH (mm)
600
500
400
300
200
100
0
0
1
2
3
4
AGE
Yrcl
1990
1991
1992
1993
1994
1995


WLI MEAN TOTAL LENGTH BY AGE
TOTAL LENGTH (mm)
600
500
400
300
200
100
0
0
1
2
3
4
AGE
Yrcl
1996
1997
1998
1999
2000
2001

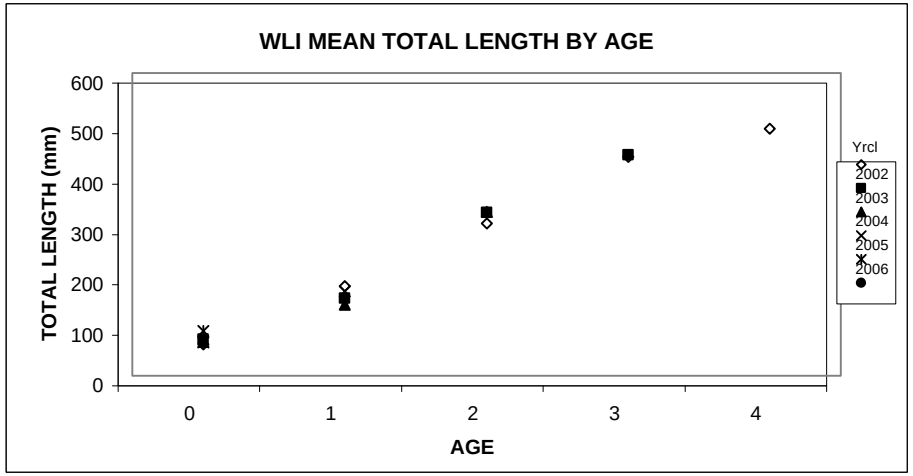

WLI MEAN TOTAL LENGTH BY AGE
TOTAL LENGTH (mm)
600
500
400
300
200
100
0
0
1
2
3
4
AGE
Yrcl
2002
2003
2004
2005
2006

FIGURE 11

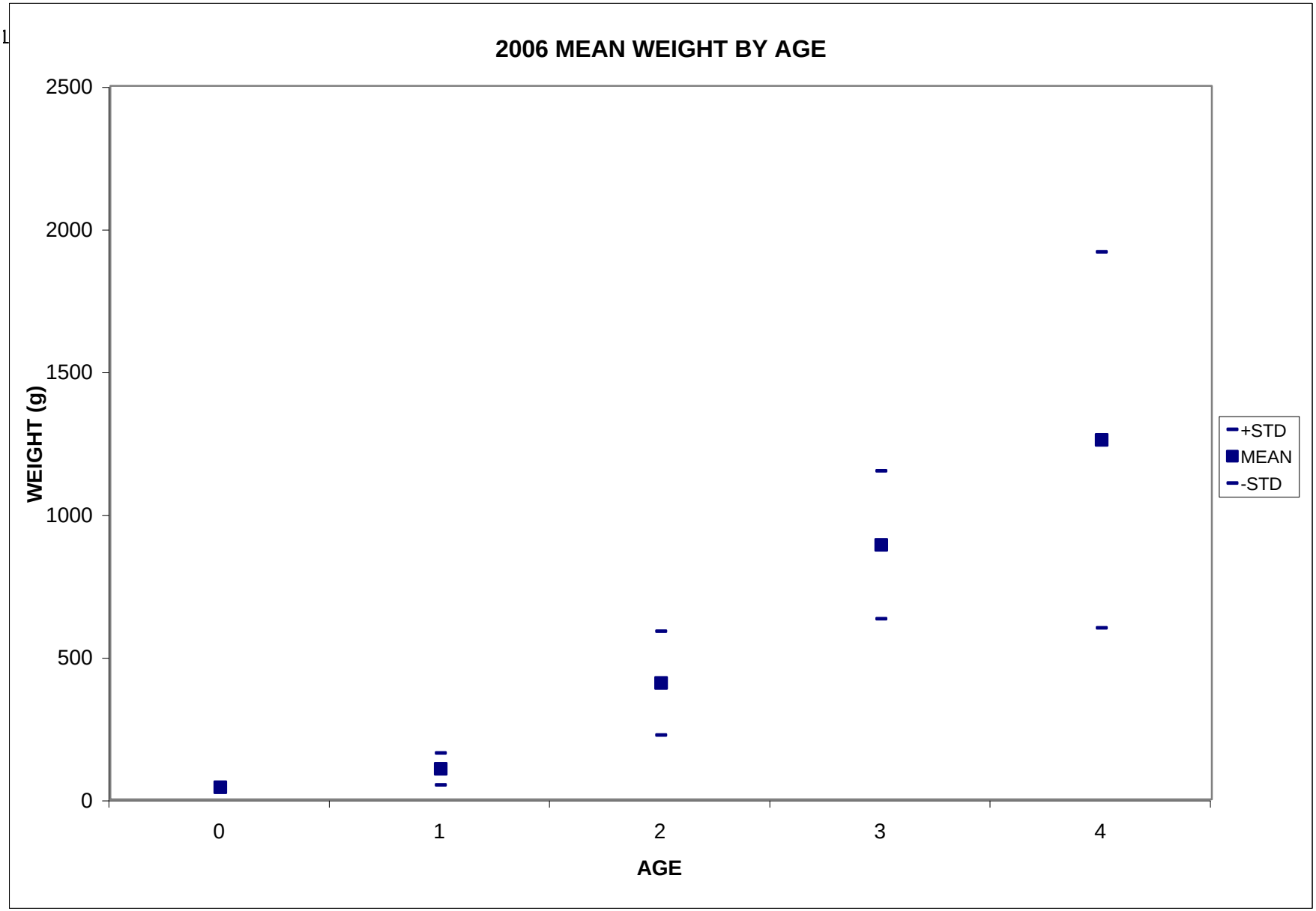

2006 MEAN WEIGHT BY AGE
WEIGHT (g)
2500
2000
1500
1000
500
0
0
1
2
3
4
AGE
+STD
MEAN
-STD

FIGURE 12

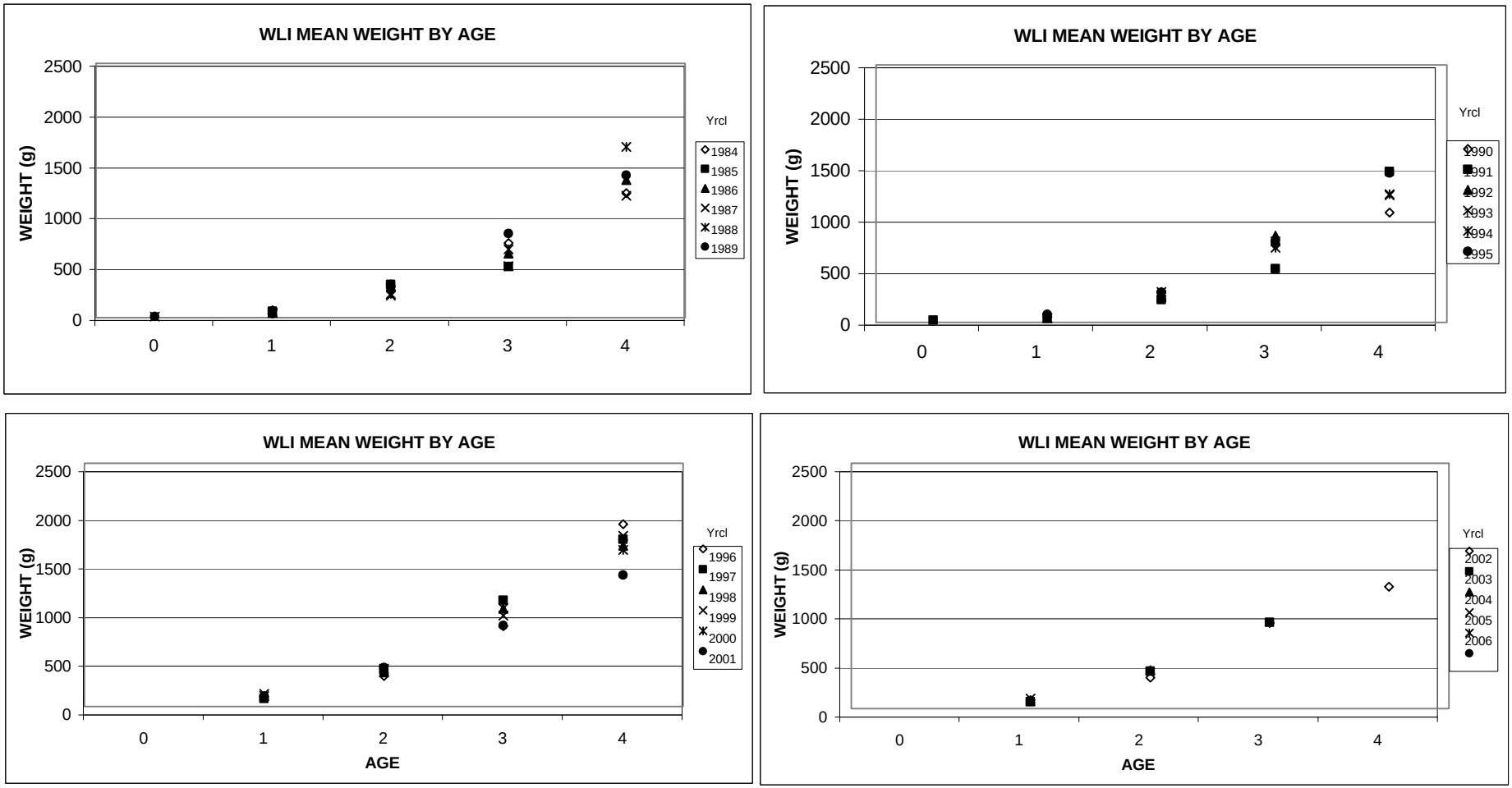

WLI MEAN WEIGHT BY AGE
WEIGHT (g)
2500
2000
1500
1000
500
0
0
1
2
3
4
Yrcl
1984
1985
1986
1987
1988
1989
WLI MEAN WEIGHT BY AGE
WEIGHT (g)
Yrcl
1990
1991
1992
1993
1994
1995
WLI MEAN WEIGHT BY AGE
WEIGHT (g)
AGE
Yrcl
1996
1997
1998
1999
2000
2001
WLI MEAN WEIGHT BY AGE
WEIGHT (g)
AGE
Yrcl
2002
2003
2004
2005
2006

FIGURE 13

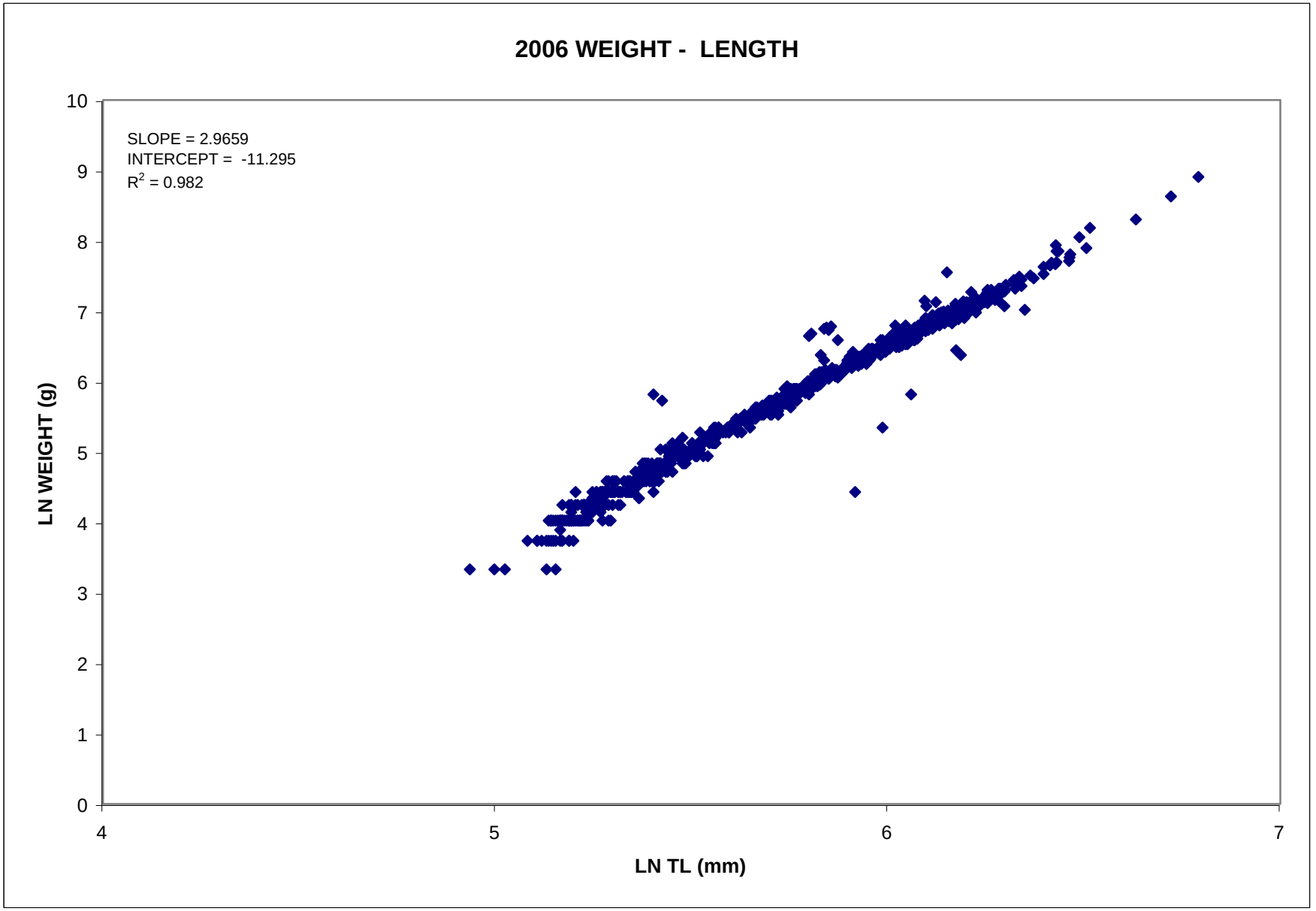

2006 WEIGHT - LENGTH
SLOPE = 2.9659
INTERCEPT = -11.295
R2 = 0.982
LN WEIGHT (g)
LN TL (mm)
0
1
2
3
4
5
6
7
8
9
10
4
5
6
7

FIGURE 14

WLI Striped Bass Survival Adjusted for Live Release Bias

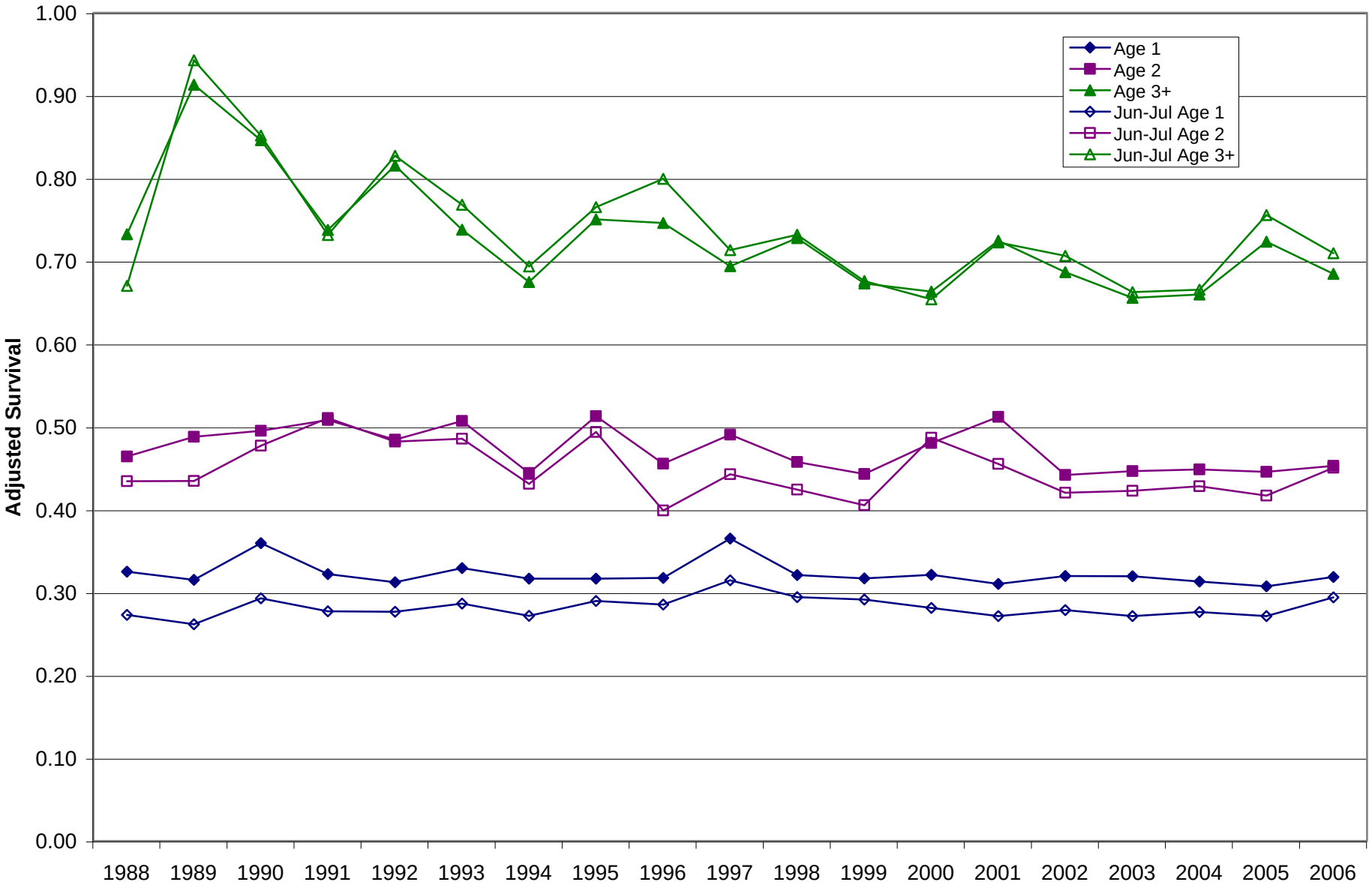
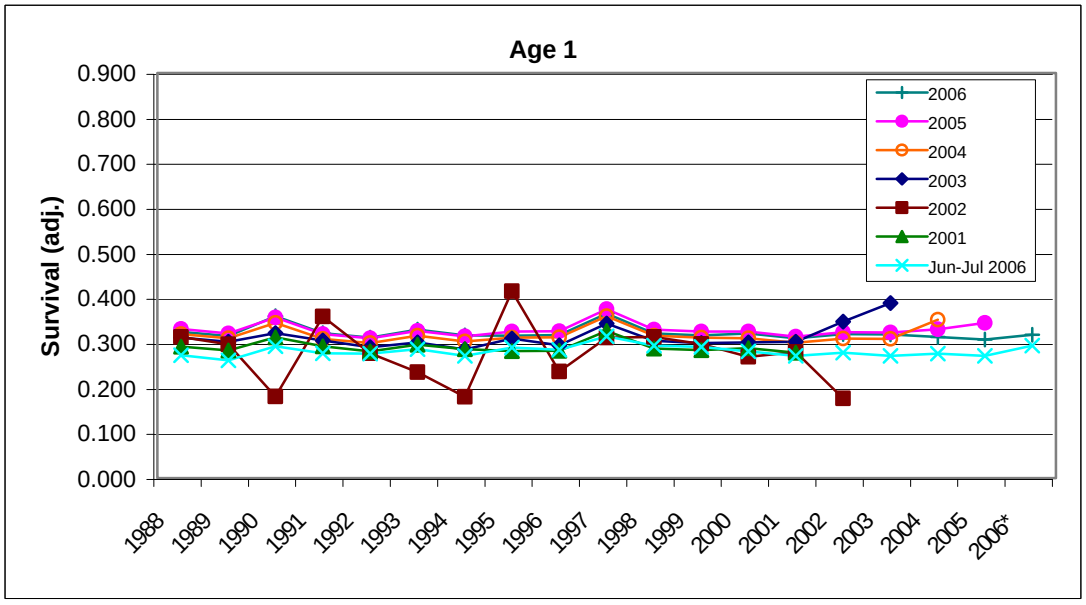
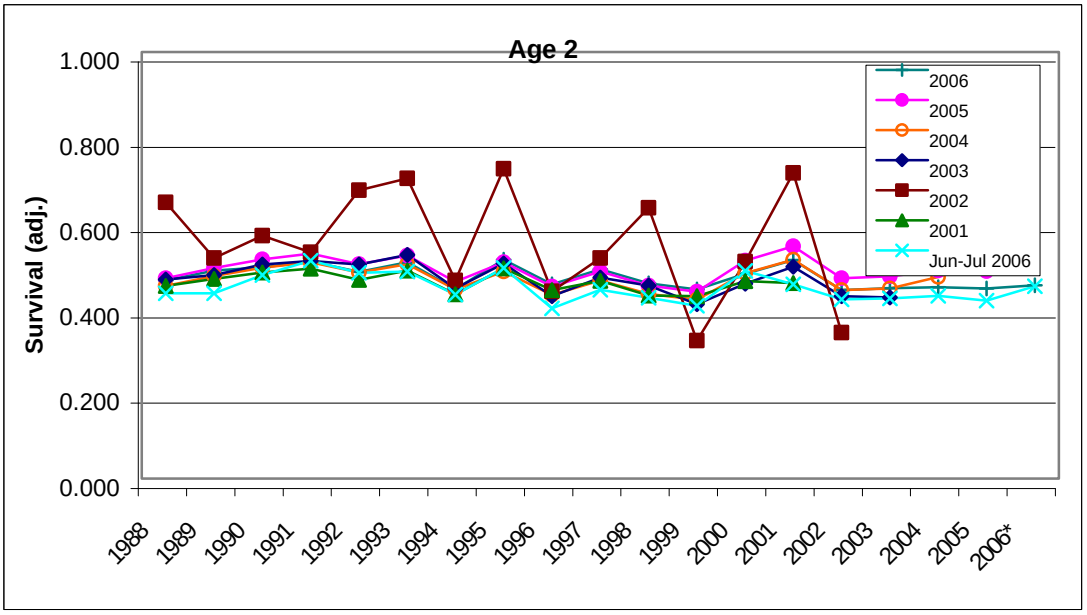


FIGURE 15

WLI STRIPED BASS SURVIVAL ESTIMATES
FROM 2001 - 2006 DATA SETS





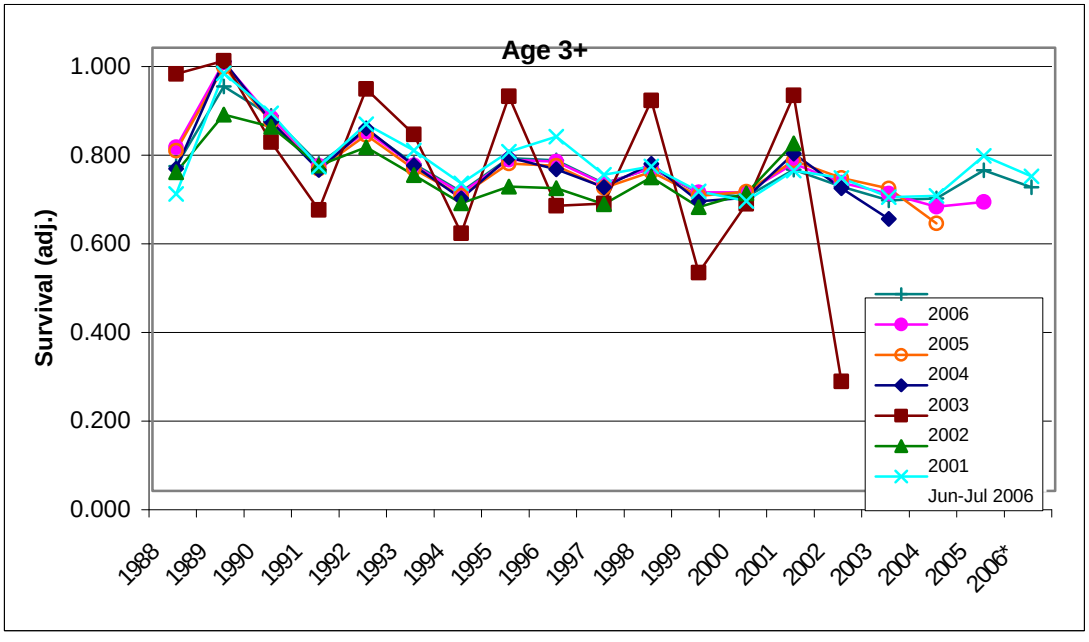
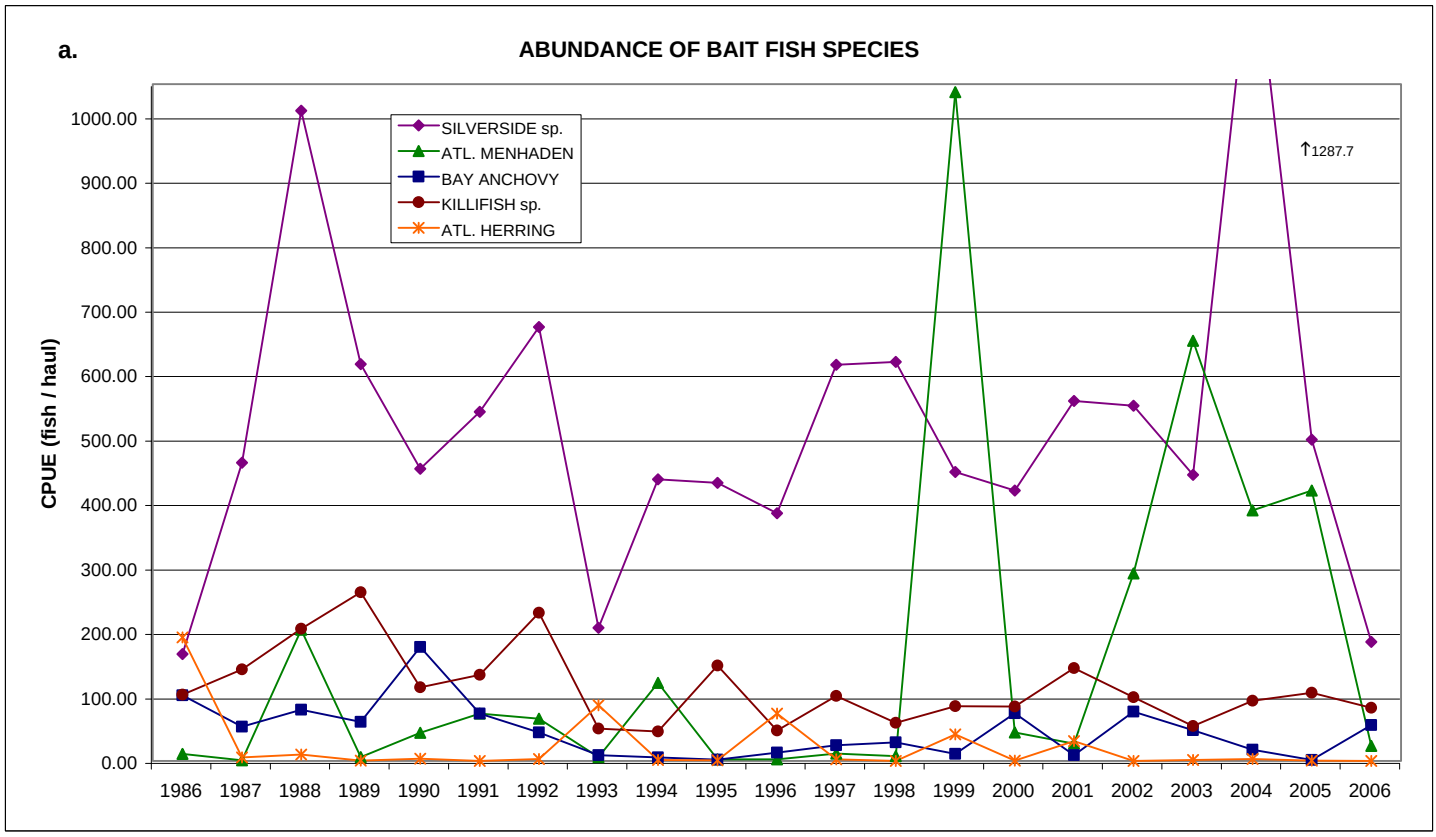


FIGURE 16


a.
ABUNDANCE OF BAIT FISH SPECIES
CPUE (fish / haul)
SILVERSIDE sp.
ATL. MENHADEN
BAY ANCHOVY
KILLIFISH sp.
ATL. HERRING
↑1287.7
0.00
100.00
200.00
300.00
400.00
500.00
600.00
700.00
800.00
900.00
1000.00
1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006

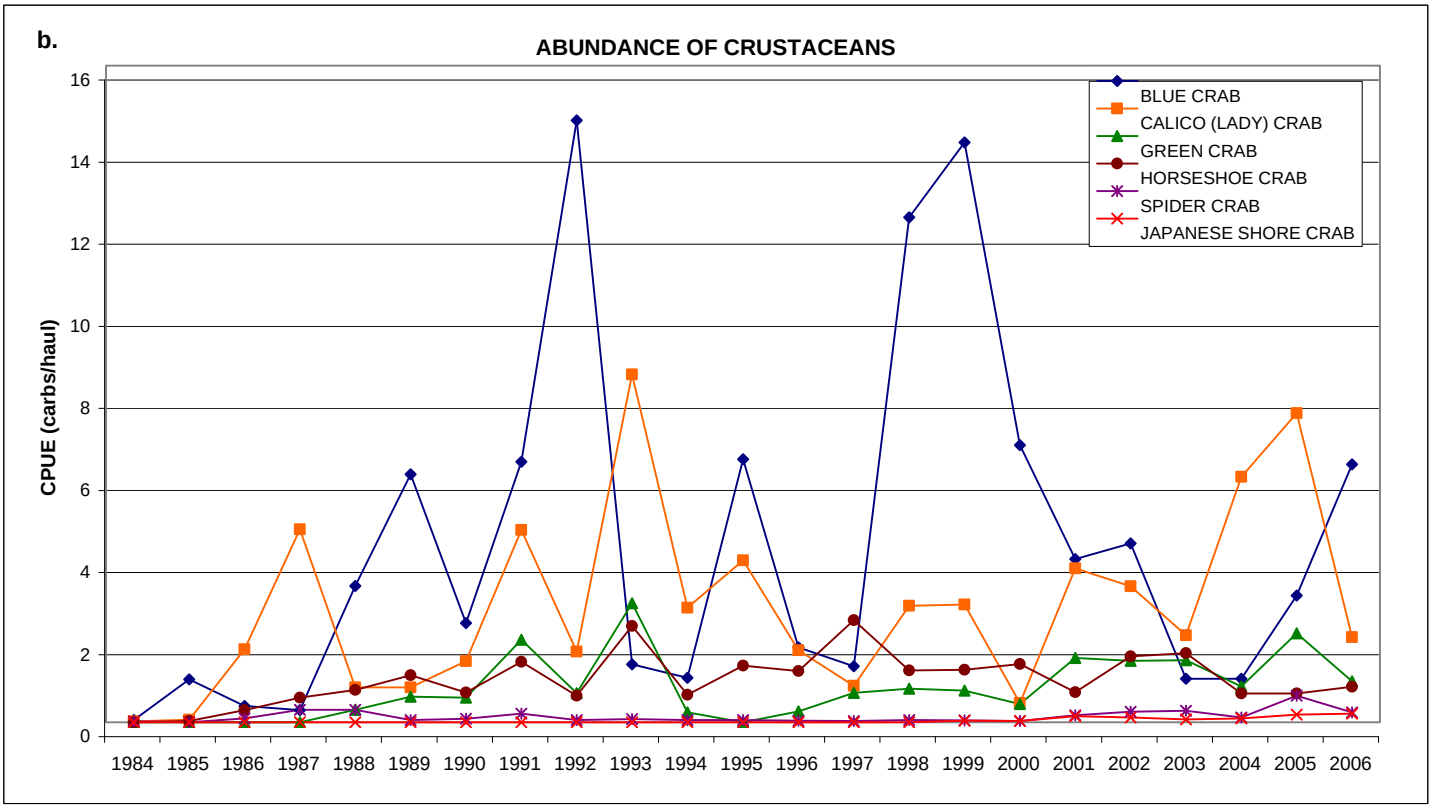

b.
ABUNDANCE OF CRUSTACEANS
CPUE (carbs/haul)
BLUE CRAB
CALICO (LADY) CRAB
GREEN CRAB
HORSESHOE CRAB
SPIDER CRAB
JAPANESE SHORE CRAB
0
2
4
6
8
10
12
14
16
1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006

FIGURE 17

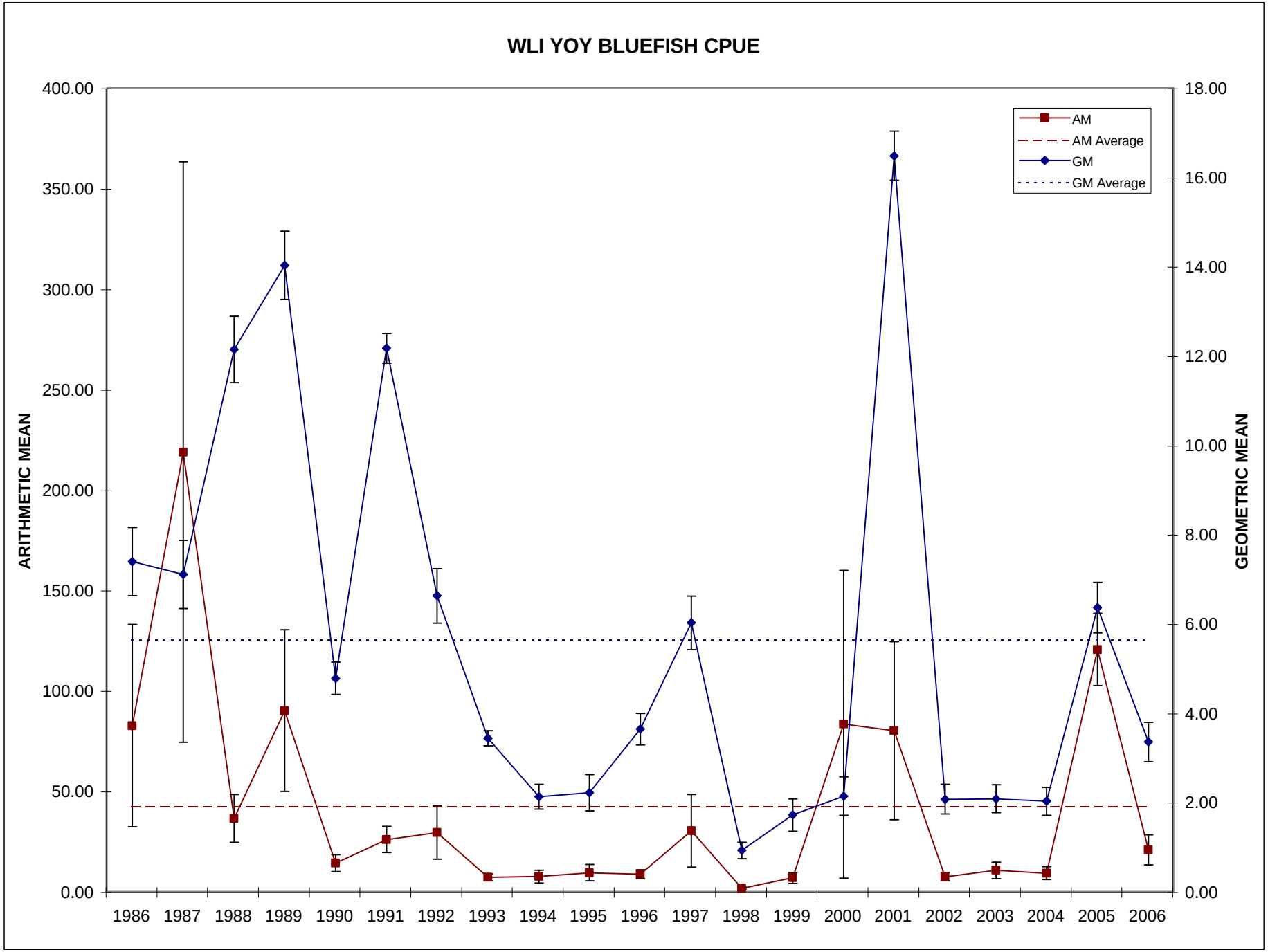
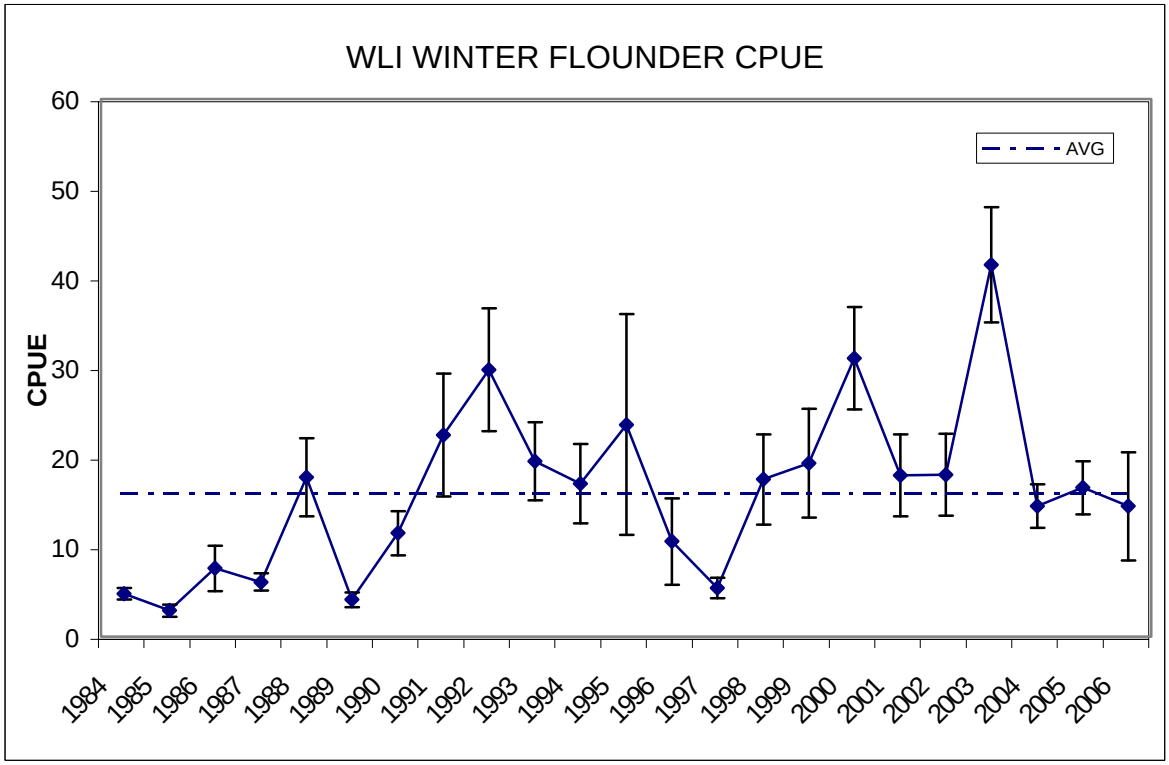

WLI YOY BLUEFISH CPUE
ARITHMETIC MEAN
GEOMETRIC MEAN
400.00
350.00
300.00
250.00
200.00
150.00
100.00
50.00
0.00
18.00
16.00
14.00
12.00
10.00
8.00
6.00
4.00
2.00
0.00
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
AM
AM Average
GM
GM Average

FIGURE 18


WLI WINTER FLOUNDER CPUE
CPUE
AVG
60
50
40
30
20
10
0
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006

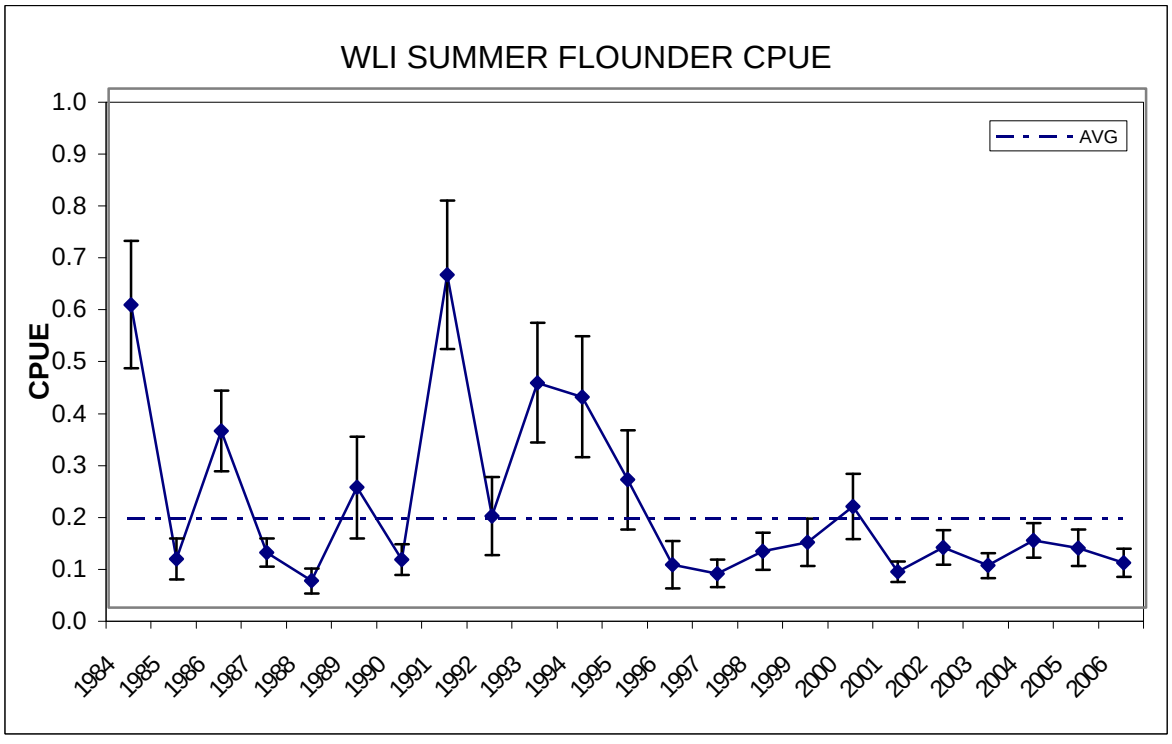
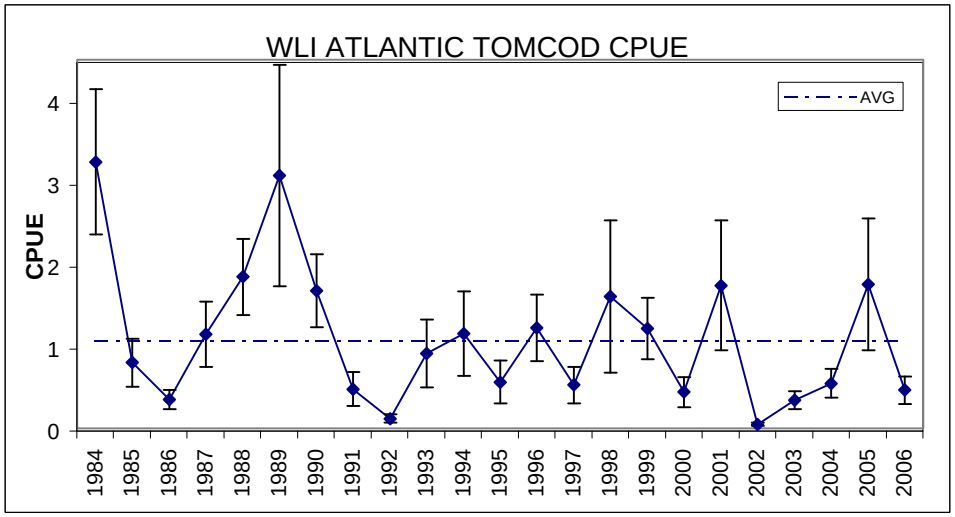
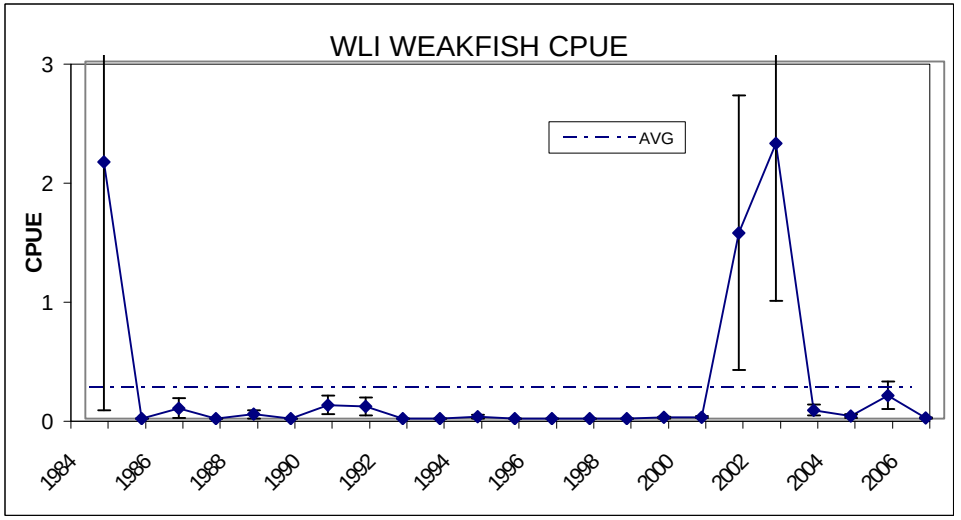
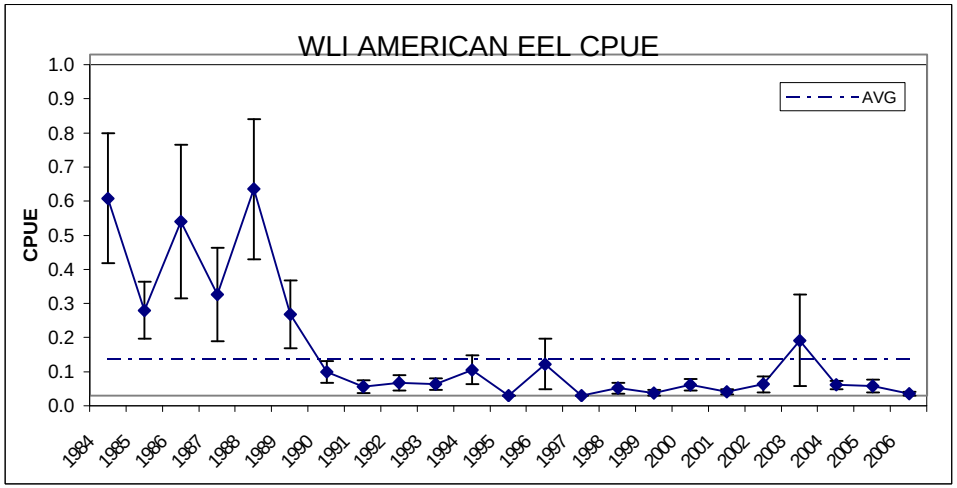

WLI SUMMER FLOUNDER CPUE
CPUE
AVG
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006

FIGURE 19


WLI ATLANTIC TOMCOD CPUE
AVG
CPUE
0
1
2
3
4
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006


WLI WEAKFISH CPUE
AVG
CPUE
0
1
2
3
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006


WLI AMERICAN EEL CPUE
AVG
CPUE
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006

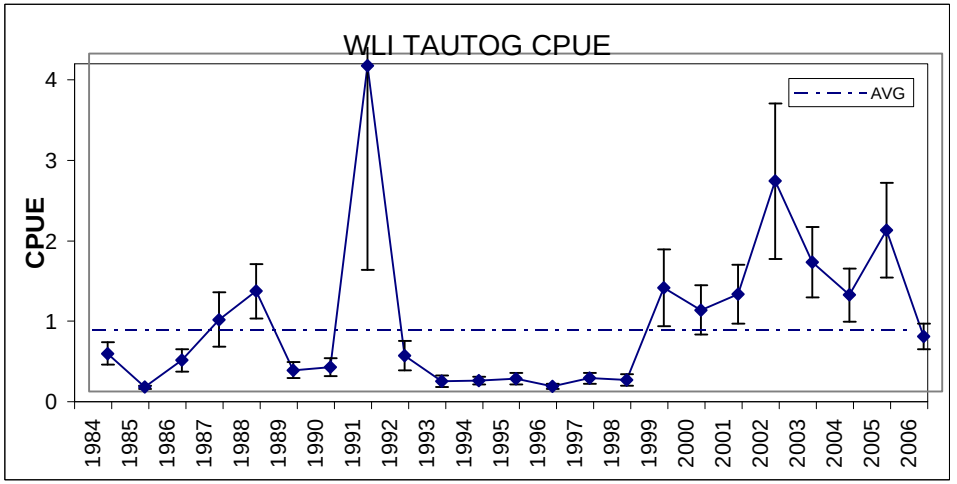

WLI TAUTOG CPUE
AVG
CPUE
0
1
2
3
4
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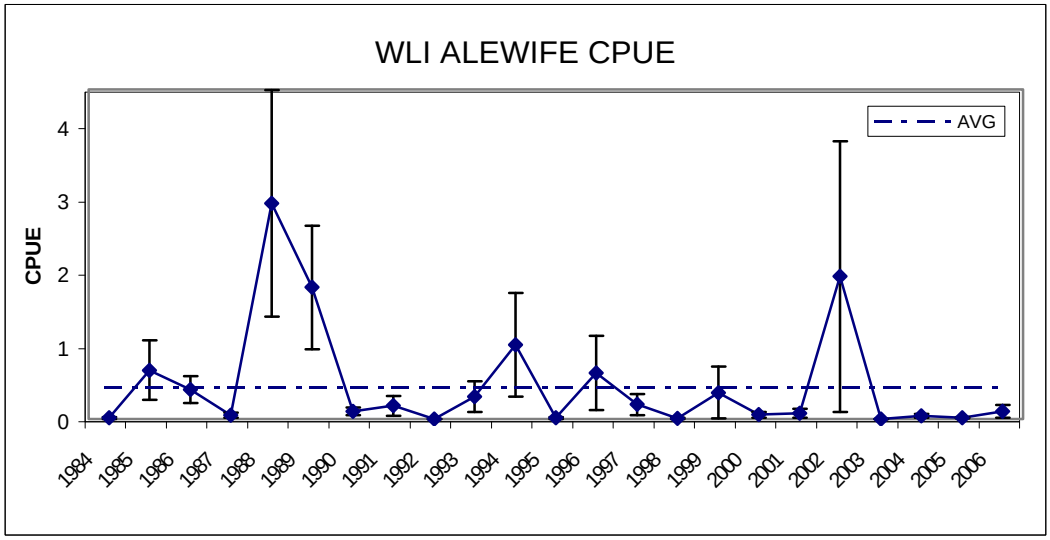
FIGURE 20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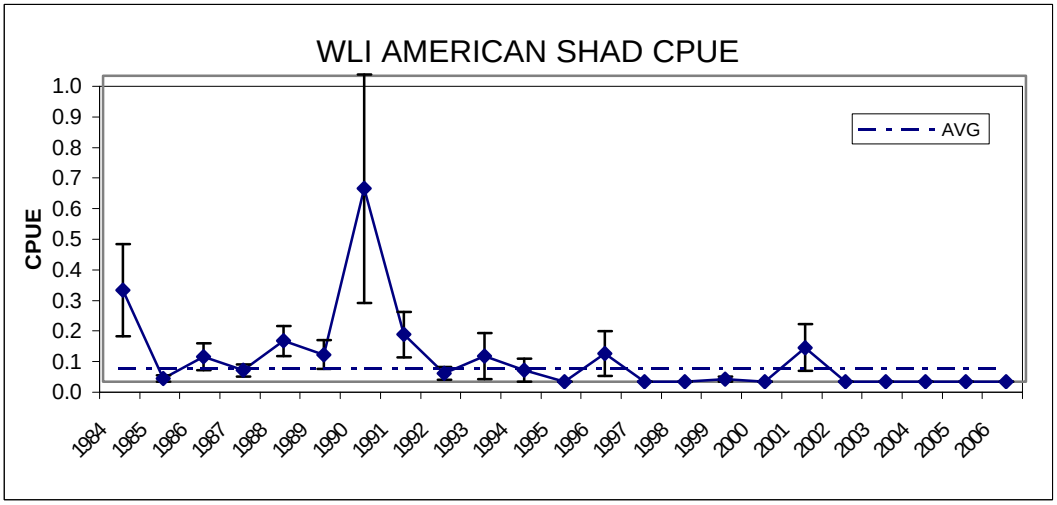
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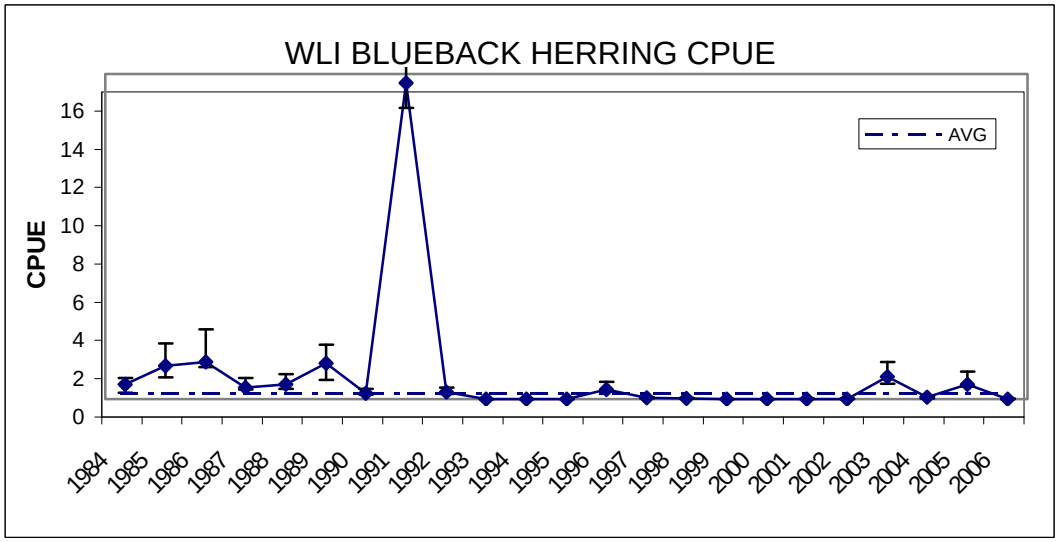
WLI BLUEBACK HERRING CPUE
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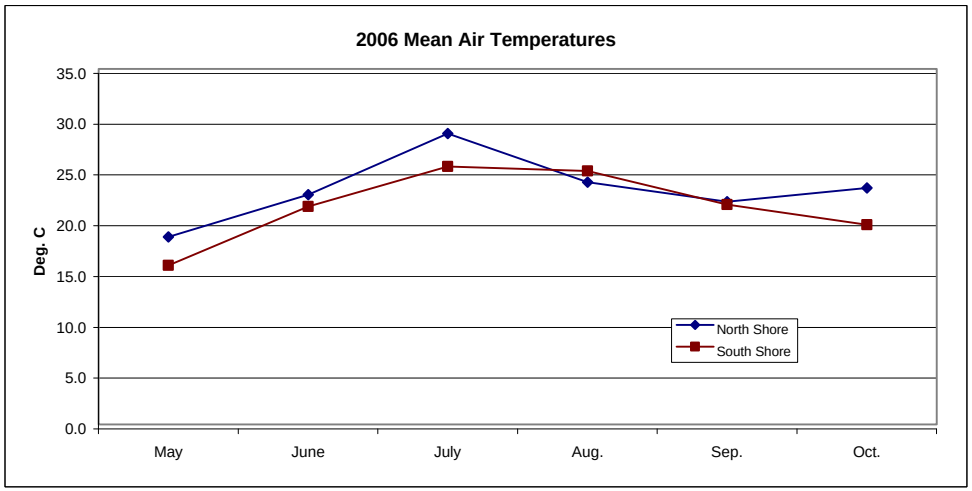
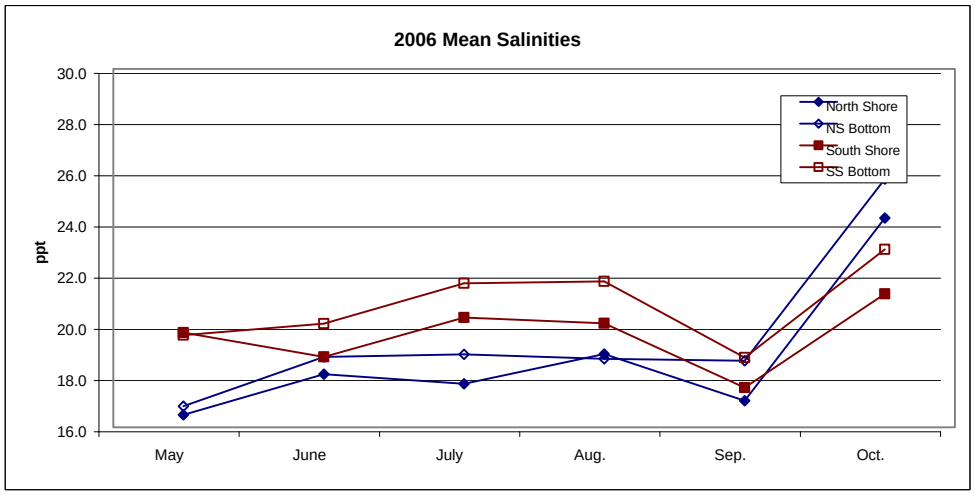
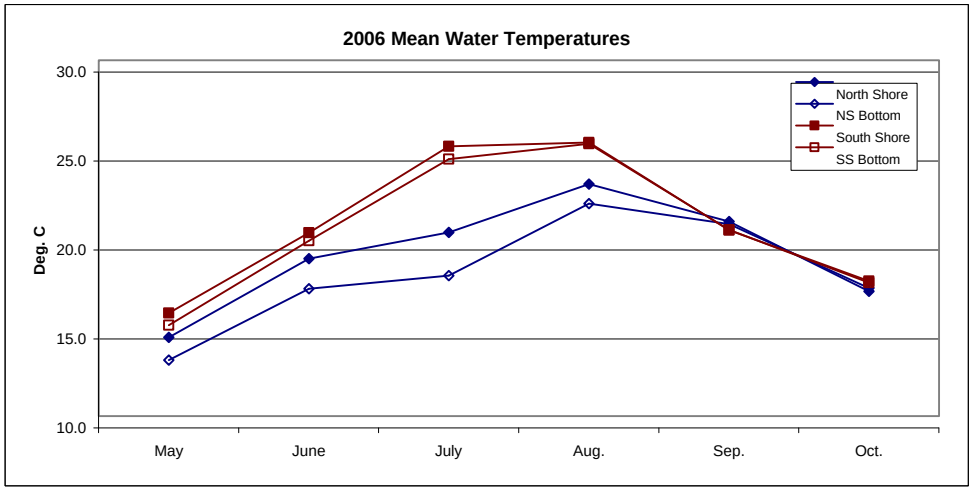
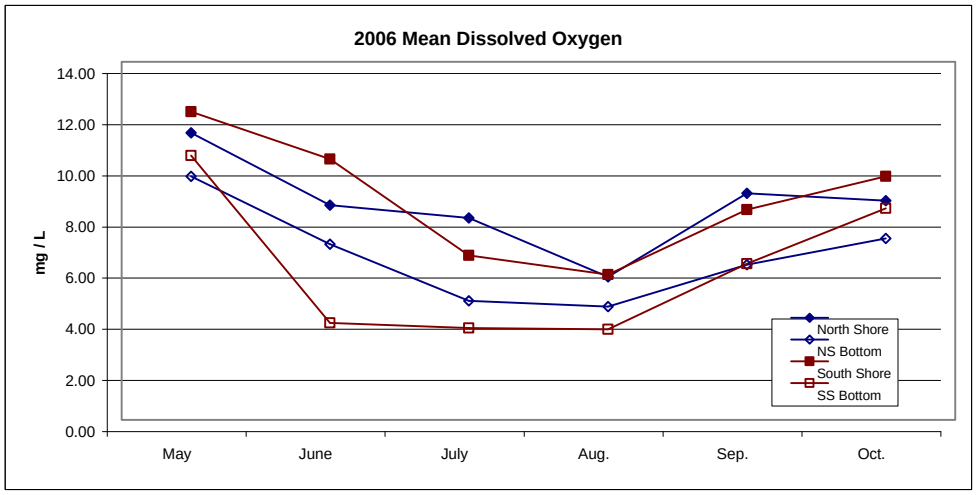
75 FIGURE 21 2006 WLI ENVIRONMENTAL DATA BY MONTH









Nearshore fish communities of the mid-Hudson River estuary, 1985-2006

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Abstract

In the 2006, 221 seine hauls were completed in the young-of-the-year (YOY) striped bass survey in the Hudson River. A total of 2,265 YOY striped bass were captured, resulting in a geometric mean catch per unit effort (CPUE) of 8.32 fish/haul. The Hudson River index of YOY striped bass abundance, based on the geometric mean CPUE of the 6-week survey, was 3.82 fish/haul. This catch rate was lower than the average historical geometric mean CPUE of 13.87 fish/haul. YOY striped bass grew at an estimated 0.67 mm/day between mid-July and the beginning of September. Catches of bluefish, American shad, and blueback herring were the lowest recorded within the historical records, while catches of American eel, winter flounder, and silversides sp. were the second lowest CPUE within the historical record. YOY white perch, alewife, and blue crabs were near historical lows. Bay anchovies were the most abundant fish, followed by silverside sp. and white perch. Air and water temperatures during the survey were near the historical average. Salinity was below normal in weeks 1, 2, 8 and 9.

Introduction

The striped bass (*Morone saxatilis*) is an anadromous species spawning in large river systems. Its native range extends from the St. Lawrence River, Nova Scotia, Canada to the St. Johns River, Florida (Scott and Scott 1988). Recent estimates indicate that Chesapeake Bay populations contribute 75% of the coast-wide stock, with the Hudson River and Delaware Bay contributing 15 and 10% respectively (K. McKown, NYS DEC, personal communication). Spawning occurs in the region above the salt wedge in the spring when river temperatures rise above 12 ^{o}C. The semi-buoyant eggs and larvae drift down into the low salinity regions of the estuary. During the first summer of life, Hudson River striped bass reside in nearshore regions throughout the estuary and in coastal marine embayments (Boreman et al. 1988; McKown and Gelardi 2000). In the autumn, striped bass migrate to higher salinities in the lower estuary, the only known concentration area for over-wintering YOY fish (Dovel 1992). Striped bass were introduced to the Pacific coast in the late 1800's, where several sustaining populations have become established. Striped bass have also been introduced as a sport fish into reservoirs throughout the southern United States (Smith 1985).

Historically, this species has supported important commercial and recreational fisheries along the east coast of North America (Merriman 1941; Boreman and Austin 1985). Catches in the coast-wide commercial fishery reached a peak in 1973 at 5.98 metric tons (mt), declining rapidly thereafter to below 2 mt/year by the late 1970's (NMFS 1999). The Atlantic States Marine Fisheries Commission implemented a management strategy aimed at protecting the last successful year class (1982) in the Chesapeake Bay from harvest. Moratoria on commercial harvest of striped bass were issued for Maryland and Delaware waters. Following a strong recruitment event into the Chesapeake Bay population in 1989, a limited fishery was re-established. Continued improvement in recruitment to the Chesapeake Bay population has allowed increases in harvest levels in recent years (Richards and Rago 1999). Since the late 1970's improvements in water quality in the Delaware River have allowed the increased production of striped bass in that system (Weisberg et al. 1996). The commercial fishery in the Hudson River was closed and recreational harvest restricted in 1976 due to concerns over high levels of poly-chlorinated biphenols (PCBs) in fish flesh (NMFS 1999). An initiative to allow a

limited commercial harvest of striped bass as part of the American shad fishery has been discussed, but not implemented (DEC 1999).

Indices of the abundance of early life stages of striped bass, to monitor annual recruitment patterns, have been developed for several east coast populations, including the main tributaries to the Chesapeake Bay and the Hudson River (Goodyear 1985; McKown 1991; Heimbuch et al. 1992). The use of these indices as predictors of future population size is based on the assumption that recruitment level is determined prior to the life-stage surveyed (Bradford 1992). Goodyear (1985) validated the Maryland Department of Natural Resources YOY index based on its relationship to fishery harvests when those year-classes entered the fishery. Based on this result, a number of studies have been conducted to determine the factors regulating survival during the larval phase in the Chesapeake Bay population (Uphoff 1989; Secor and Houde 1995; McGovern and Olney 1996). The index of YOY abundance in the Hudson River population was correlated with the abundance of age-1 fish, indicating its utility in predicting recruitment (McKown 1991).

A more recent analysis, which incorporates a longer time series, found that the abundance of age-1 fish is influenced by the severity of winter (Hurst and Conover 1998). Mortality of over-wintering YOY striped bass in the Hudson River and Miramichi populations has been shown to be size-selective against smaller fish (Bradford and Chaput 1997; Hurst and Conover 1998). These analyses suggest that the first winter of life may play an important role in the recruitment dynamics of these northern populations. We will provide the CPUE data for age-1 striped bass as to assist with determining overall recruitment trends.

Here we present the results of the 2006 young-of-the-year survey for the Hudson River population of striped bass and compare the results to previous years. Because of the advancement of ecosystem-based management, catch data for all species captured during the survey is included. Detailed catch data and size-distributions are included for a number of other commercially valuable species as well.

Methods

The survey is conducted between mid-July and early November in the Haverstraw-Tappan Zee region of the Hudson River (river miles 23-42; Figure 1). Within this stretch of river,

25 sites are sampled bi-weekly, 9 times. The 25 sites sampled during each bi-weekly survey, are chosen from 36 potential fixed stations based on prevailing conditions (wind direction, speed and tide stage). Prior to 1985, stations were sampled 6 times between late August and early November. A subset of data from 1985 to 2006, covering the same period, is used to compare with data from 1980 to 1984.

Fish collections are made with a 200 foot x 10 foot (12 foot depth in the bag) beach seine with 1/4 inch square mesh in the wings and 3/16 inch square mesh in the bag (61 m x 3 m with 6 mm wing mesh and 5 mm bag mesh), set by boat. The performance of the sampling gear and representation of the catch was rated for each set of the gear. Following each collection, measurements of air temperature, water temperature, dissolved oxygen, and salinity were made in the immediate vicinity of the gear set, using a YSI Model 85 probe. Environmental parameters such as wind direction and speed, tidal stage, wave height, cloud cover, and precipitation were recorded. The types of any aquatic vegetation in the vicinity of the sampling site were recorded and the spatial coverage of vegetation at the site was estimated. While some sites were generally sampled at a particular tidal stage or time of day, due to accessibility, others were sampled at all tidal stages and times of day.

All fish captured were sorted by species (where feasible young-of-the-year fish were counted separately from older fish) counted and returned to the water. In the case of extremely high catch rates, a volumetric sub-sampling procedure was used to estimate catches of individual species. Young-of-the-year and older blue crabs were the only invertebrates counted. The occurrence of shrimp and gelatinous zooplankton captured in each set of the net was noted, with a visual estimate of abundance. Up to 50 YOY striped bass, and all older striped bass, were measured from each haul. In addition, up to 30 individuals each of bluefish, crevalle jack, weakfish, summer flounder, winter flounder, Atlantic tomcod, American eel, American shad, alewife, blueback herring, and Atlantic menhaden were measured (mm TL) from each collection. Atlantic silversides and YOY white perch were measured periodically throughout sampling. All measurements were made in the field and fish were returned to the water at the site of capture.

Scales were removed from above the lateral line between the first and second dorsal fins, from all striped bass larger than 110 mm TL. These scales were pressed into acetate at 180 ^{o}C and 2000 lbs./foot^{2}. The age of all fish larger than 110 mm was determined by visual analysis of

the acetate impression of multiple scales, under magnification.

All captured striped bass larger than 170 mm TL were tagged as part of the United States Fish and Wildlife Service coast-wide tagging program. Tags were individually numbered floy type tags with 6.5 x 19.25 mm oval anchor and 91 mm streamer. A few scales were removed from the fish, half way between the pectoral and anal fin, an incision was made through the body wall, and the tag anchor was inserted into the body cavity.

Results and Discussion

During the 2006 sampling season, 221 beach seines were collected in 9 sampling trips conducted between July 18th and November 8th. During this sampling, a total of 22,265 fish were collected (Figure 2). This was 1,206 greater than the lowest catch of 2,1449 in 1980, making it the second lowest catch on record. In the survey years with 9 sampling weeks, this was the lowest annual year. Striped bass have not experienced the same decline as the other species (Figure 2). The number of blue crabs increased to 406, compared to 314 in 2005. Of the 22,265 fish caught 2,233 were young-of-the-year striped bass and only 60 were older striped bass.

Environmental conditions

Weekly average water temperatures increased in the first two weeks of the sampling season, with a high of 30.1 ºC on August 1 (Table 1; Figure 3). Water temperatures after the second week declined throughout the sampling season with a low of 11.2 ºC on November 8 (Table 1; Figure 3). Air temperatures also generally decreased during the sampling season, ranging from 35.7 to 12.3ºC. Both air and water temperatures followed the historical averages (Table 1; Figure 3). Salinity in the Lower Hudson River started out on July 11th near the historic average of 5.4 ppt, with an average of 3.5 ppt. Salinity subsequently remained near the historic average for the first 6 weeks of sampling where it declined suddenly in week 7, where the lowest salinity of 0.8 ppt was recorded after a significant rainfall event. Salinity was lower than historical averages for weeks 1, 2, 8 and 9 (Table 1; Figure 3). Weekly average of dissolved oxygen levels ranged between 5.53 and 8.92 mg/L throughout the sampling season, and did not show any distinct seasonal pattern.

Species composition

Forty-two different species of fish were captured in the Hudson River during the 2006 sampling season. Fish catches varied throughout the sampling period without a seasonal trend. Catches peaked in sampling week 3 (August 17) with 5,769 fish and week 5 (September 19) with 4,919 fish. The large catch from sampling week 3 was dominated by bay anchovies, while the catch from sampling week 5 was dominated by bay anchovies and silversides. The lowest catches were observed in sampling weeks 8 (October 25-26) and 9 (November 8) with 681 and 120 fish caught in those sampling weeks respectively. Bay Anchovy (9,120), silversides (3,453 fish), white perch (2,801), Atlantic menhaden (2,636), and striped bass (2,293 fish) were the most abundant species in 2006. These five species represented a total of 89.61% of the total catch. Catch composition during the 2006 sampling season is compared to historical catch composition in Tables 3, 4, and 5. Detailed catch information on selected species is presented below.

Striped bass, *Morone saxatilis*

During the 2006 sampling season 2,233 YOY striped bass were captured in 221 hauls, with a mean CPUE of 10.10 and a geometric mean CPUE of 4.84 (Table 6). Between 1980 and 1985, catch data was collected in a period corresponding to the last 6 weeks of the 2006 sampling season. In order to compare 2006 catch data with results obtained previous to 1985, the statistics on the final 6 weeks of catch data for 2006 is presented in Table 6 together with historical records. In the final six weeks, 1,232 YOY striped bass were captured in 148 hauls, resulting in a mean CPUE of 8.32 and a geometric mean CPUE of 3.82 (Figure 4). The 6-week geometric mean CPUE, used as the young-of-the-year striped bass index of relative abundance, was low in 2006 compared to previous years. It was much lower than the historical average of 13.87, is the lowest value within the last five years and the fourth lowest value on record. The 2006, 9-sampling week geometric mean of 4.84 was also much lower than the historical average of 19.16 (Table 6). This is lowest value within the last nineteen years and the third lowest value on record.

Catch-per-unit-effort of YOY striped bass peaked during the second week of the survey

at 23.04 fish/haul, which was similar to 2003. The lowest catch rate of 1.88 fish/haul was reached during the final week of the survey. In 2001, 2002, 2004, and 2005 catch rates peaked late in weeks 4 and 5. Catch patterns similar to that of 2001, 2002, 2004 and 2005 with peak catch rates in week 4 or 5 of the survey, were also observed in 1987, 1997, and 1999. The reason for the late peak in catch rate observed during some years is unknown. It has been hypothesized that YOY striped bass, recruiting to the western Long Island bays early in the summer migrate back to the Hudson River nursery area later in the year. However, when comparing catch records in the western Long Island bays and the Hudson River, this hypothesis is not supported by observations. Only after 2001 have YOY striped bass been observed in sufficient numbers from the Western Long Island Beach Seine Survey to potentially affect the abundance of striped bass in the Hudson River survey. Furthermore, years of high abundance recorded in western Long Island bays does not correspond to the years in the Hudson River with peak catch rates occurring late in the year (Brischler, 2004).

Catch-per-unit-effort of YOY striped bass varied considerably across sites in 2006 (Table 7). The sites with the highest CPUE, 7EW and 7W captured 38.7 fish/haul and 22.9 fish/haul respectively. Station 11E, had the lowest catch rates of 1.3 fish/haul (Table 7). The distribution of catch among sites observed in 2006, was generally consistent with previous years. Annual catch-per-unit-effort data for the full 9-week survey and the 6-week subset, are shown in Tables 8 and 9.

Total length measurements were made on 1,984 YOY striped bass during the 9-week survey. Striped bass ranged in size from 22 to 140 mm. The bi-weekly size-frequency distributions of YOY striped bass are shown in Table 10. Mean bi-weekly lengths of YOY striped bass, captured during the 2006 sampling season are compared to previous years in Table 11. Mean lengths of measured fish increased through the first five sampling weeks, and were relatively stable thereafter (Figure 5). The apparent cessation of growth in YOY striped bass, based on observed fish lengths has been observed in most years of the study, and may in part be due to a size-dependent emigration from the nursery area to the lower estuarine wintering grounds. The alternative explanation is that growth ceases because of limited availability of food. Growth rate of YOY striped bass in the 2006 cohort, estimated from the regression of mean total length against date, was 0.67 mm/day through the first 5 weeks of the survey. This is in the

lower range of the mean growth rates observed. Annual cohort growth rates ranged from 0.46 mm/day in 1990 to 0.90 mm/day in 1999 (Figure 6). In an analysis of historical data, Hurst (2000) found that body sizes of YOY striped bass in August and October were negatively related to density in the nursery area suggesting density dependent growth.

The age composition of striped bass captured between 1985 and 2006 is shown in Table 12. During the 9-week survey, 60 striped bass aged 1 to 2 were captured and ranged in length from 100-245 mm TL (Table 13). Older striped bass were most abundant at site 7W where CPUE was 0.6 (Table 14). Eight of the yearling striped bass, ranging in length from 174 to 245 mm, were tagged with internal anchor tags as part of the United States Fish and Wildlife Service coast-wide tagging program. The age 1+ striped bass CPUE was the fourth lowest value in the past 21 years and the last 4 years of data have been all been well below the long-term running average (Figure 7).

White perch, *Morone americana*

In 2006, a total of 2,891 white perch were captured. White perch were classified as either young-of-the-year or older, based on observed size-distribution among the catch. Of the white perch captured, 793 were YOY and 2,098 were age-1 or older. Young-of-the-year white perch were most abundant at sites 12W (Table 15). Catch-per-unit-effort of YOY white perch was highest in week 2 (11.64 fish per haul), and lowest in week 9 (0.13 fish per haul). Older white perch were most abundant at site 8E (Table 16). This was mainly due to an isolated catch of 659 older white perch. During the sampling season catch-per-unit-effort of older white perch was highest in week 6 (30.64 fish per haul; due to reasons stated above) and lowest in weeks 8 and 9 (0.25 fish per haul; Table 16), a trend that is also shown in the length frequency distribution (Table 17).

Through the entire study period, the highest mean catch rates of YOY white perch were 75.75 fish per haul in 1988 and 37.89 fish per haul in 1986 (Figure 8). Catch rates of less than 2 fish per haul occurred in 1995 and 1997. In 2006, mean catch rates of YOY white perch were 3.59 fish per haul. This catch rate is equivalent to historically low catch rates found from 1990 to 1998. The reasons for the low catch rates are unknown. Catch rate has slightly increased from last year but catches still remain well below the historical average of 13.56 fish per haul (Figure

5). Catch rates of older white perch increased in 2006 to 9.49 fish per haul (Figure 8). This value is much higher than the two previous reported years and is just below the historical average of 12.56 fish per haul (Figure 8).

Atlantic tomcod, *Microgadus tomcod*

During the 2006 sampling season, a total of 2 Atlantic tomcod were captured for a CPUE of 0.01 fish per haul (Table 18a,b; Figure 8). The CPUE was also low in 1991, 1993, 1994, 1995, 1999 and 2002. In those years, catch rates were as low as 0.019 fish per haul. High catches of 2.64 and 2.30 fish per haul were observed in 1988 and 1998 respectively (Figure 8).

American eel, *Anguilla rostrata*

In 2006, a total of 24 American eel were captured during sampling. The highest catch rate of nine fish was observed at site 12W (Table 19). The catch rate of 0.10 eels per haul was the second lowest recorded catch per unit effort within the historical records (Figure 9), with last year being the lowest on record. The highest catches (0.78 fish per haul) occurred in 1988. American eel ranged in length from 92 to 665 mm TL, with an overall mean length of 209.5 mm. The bi-weekly size-frequency distributions of American eel are shown in Table 20.

Bluefish, *Pomatomus saltatrix*

In 2006, 221 YOY bluefish were captured. The bluefish spring-spawned cohort was present in the catches from week 1 to week 8, while the summer-spawned cohort was only observed in weeks 3,5, and 6 (Table 22). The mean CPUE was 0.46 fish per haul in 2006 (Table 21, Figure 6). This was the lowest CPUE on record (Figure 9). Catch rates of YOY bluefish have been declining since 2001 (Figure 8). CPUE in 2001 (4.14 fish per haul) was the 4th highest CPUE effort recorded, CPUE in 2002, 2003, 2004, and 2005 were 2.9, 1, 0.79 and, 0.66 fish per haul, respectively (Figure 9). The highest bluefish abundances ever observed was in 1999 (Figure 8) with a CPUE of 13.76 fish per haul. Bluefish captured in 2006 ranged in length from 54 to 270 mm TL (Table 22). Based on the size-frequency distributions (Table 22), spring spawned bluefish were more abundant than the summer spawned bluefish. The spring cohort is spawned in the South Atlantic Bight in March-April, and the summer cohort is spawned in the

Mid-Atlantic Bight in June-July (Munch and Conover 2000).

Winter flounder*, Pleuronectes americanus*

In 2006, a total of eight winter flounder were caught during week 4-7. This was the second lowest CPUE (0.03 fish per haul) on record for the history of this survey (Figure 9). The previous historical extreme low CPUE (0.01fish per haul) was observed last year (Figure 9). The highest catch rates recorded were observed in 1985 with a CPUE of 2.52 fish per haul (Figure 9). The winter flounder lengths ranged from 62-106mm TL. The bi-weekly size-frequencies are shown in Table 24.

American shad, *Alosa sapidissima*

In 2006, 14 American shad were captured. This is the lowest CPUE (0.06 fish/haul) on record for the history of this survey. Weekly CPUE of American shad was highest (0.25 fish per haul) in week 2 of sampling. The CPUE of American shad in 2005 (0.67 fish per haul) was the second lowest CPUE recorded for American shad (Figure 10). The highest catch rate (22.3 fish per haul) was observed in 1986 while the lowest catch rate (0.439 fish per haul) was recorded in 1998 (Figure 10). American shad ranged from 73-125 mm TL, with a mean length of 93.2 mm (Table 26).

Alewife, *Alosa pseudoharengus,* and Blueback herring, *Alosa aestivalis*

During the 2006 sampling, 30 alewife and 86 blueback herring were captured (Table 27 and 29). Alewife ranged in length from 43-113 mm TL, with a mean of 76.73 mm (Table 28). Blueback herring measured 30-115 mm TL with a mean length of 55.16 mm TL (Table 30). Catches of blueback herring are the lowest CPUE on record, yielding 0.39 fish/haul (Figure 10). Catches of Alewife were also well below the average CPUE of 0.93 fish/haul and the fifth lowest CPUE on record, 0.14 fish per haul (Figure 10).

Atlantic menhaden, *Brevoortia tyrannus*

During the 2006 sampling, 3,170 Atlantic menhaden were captured with a mean CPUE of

14.34 fish per haul (Table 31, Figure 11). One high catch of 2,194 Atlantic menhaden occurred within week one at station 7EE (Table 31). Measured Atlantic menhaden ranged from 29 to 335 mm TL with a mean of 91.79 mm TL (Table 32).

Silverside species, *Menidia sp.*

During the 2006 sampling, 3,175 silversides were caught. The mean CPUE of 2005 was 14.37 fish per haul. This CPUE is the second lowest in the history of this survey (Figure 11.) Annual catch rates of Atlantic silversides in the survey have been extremely variable, ranging from 7.9 fish per haul in 1989 to 191.9 fish per haul in 1994. In 2006, 1,589 silversides were measured and they ranged in length from 30 to 116 mm TL with a mean of 80.58 mm (Table 35). It should also be noted that one Rough silverside (*Membras martinica*) was captured and properly identified.

Blue crab, *Callinectes sapidus*

During sampling in 2006, 406 blue crabs were captured. Of the total crabs captured 287 were YOY blue crabs while 119 were older blue crabs. YOY blue crabs were most abundant at sites 11W and while older blue crabs were most abundant at 12E (Tables 35 and 36). Catch rates peaked in weeks 5 and 1 for YOY and older blue crab respectively. Prior to 1998, no distinction was made between YOY and older crabs, so the time trend of catch rates is presented for the total numbers of blue crabs. Catch rate in 2006 was 1.83 crabs per haul, which is below the average of the 22 year time series. The 2006 catch rate was slightly higher than the catch rate of 1.42 crabs per haul recorded in the 2005 season and 0.90 crabs per haul recorded in the 2004 season (Figure 11).

Conclusions

Catch composition during the 2006 Hudson River beach seine sampling season was generally consistent with previous years. Bay anchovies were the most abundant fish, followed by silverside sp. and white perch. The 6-week YOY striped bass index of relative abundance was 3.82, which was significantly lower than the historical average of 13.87. Growth rates of

YOY striped bass, based on length frequency progression, was 0.67 mm/day. Catches of bluefish, American shad, and blueback herring were the lowest recorded within the historical records, while catches of American eel, winter flounder, and silversides sp. were the second lowest CPUE within the historical record. YOY white perch, alewife, and blue crabs were near historical lows. Possible causes and correlates to the low abundances of many species will be investigated over the next year.

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TABLE 1 2006 HUDSON RIVER ENVIRONMENTAL DATA

		Air Temperature				H2O Temperature			
Dates	Week	Avg	Std	Min	Max	Avg	Std	Min	Max
Jul. 18	1	34.93	3.04	30.00	42.00	27.86	4.60	7.90	32.80
Aug. 1	2	35.71	4.26	29.00	44.00	30.06	1.40	27.80	33.30
Aug.17	3	28.06	6.20	4.00	35.00	26.27	5.37	2.00	29.90
Aug. 30	4	23.46	3.23	19.00	28.00	24.28	0.84	22.20	25.50
Sept. 19	5	24.10	2.27	20.00	28.00	23.48	0.59	22.10	24.40
Sept. 27	6	20.50	3.90	14.50	30.00	21.07	0.89	18.80	22.90
Oct. 17	7	12.80	0.41	12.00	13.00	16.68	0.93	14.10	18.00
Oct.25-26	8	12.33	3.75	7.00	19.00	12.94	1.56	9.70	15.00
Nov.8	9	16.21	0.41	16.00	17.00	11.21	0.16	10.90	11.60

		Salinity				Dissolved Oxygen			
Dates	Week	Avg	Std	Min	Max	Avg	Std	Min	Max
Jul. 18	1	1.90	1.27	0.50	4.60	6.70	1.74	5.25	12.12
Aug. 1	2	1.06	0.77	0.30	2.70	7.95	2.04	5.53	13.30
Aug.17	3	5.32	2.04	1.00	9.10	6.94	2.36	1.00	12.60
Aug. 30	4	5.27	1.53	3.90	8.60	5.53	0.87	4.00	7.97
Sept. 19	5	4.02	1.07	2.50	6.90	6.30	1.22	3.42	8.69
Sept. 27	6	5.14	1.96	3.10	9.10	6.79	1.03	5.24	9.80
Oct. 17	7	2.96	1.19	1.70	5.30	7.43	0.40	6.86	8.19
Oct.25-26	8	0.62	0.56	0.20	2.00	8.32	1.79	0.70	10.02
Nov.8	9	0.17	0.12	0.10	0.50	8.92	0.40	8.30	9.82

TABLE 2 HUDSON RIVER ENVIRONMENTAL DATA 1985 - 2006

Mean Air Temperature (deg. C)

Week	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
1	28.7	27.9	30.4	28.7	23.6	27.4	27.4	22.2	28.4	24.6	27.9	24.1	24.0	30.1	28.2	28.2		31.3	27.9	26.5	------	34.9
2	29.3	26.8	31.4	28.0	33.0	25.3	22.8	23.1	27.6	27.7	30.3	27.0	28.2	27.6	26.1	31.7	26.9	33.9	25.0	26.5	30.3	35.7
3		24.2	28.2	31.1	24.5	22.5	22.6	23.2	24.0	23.6	26.8	26.2	29.3	26.4	27.0	26.5	28.4	31.2	30.7	23.9	29.2	28.1
4	25.0	24.1	22.1	20.5	24.7	23.4	20.6	19.0	25.4	20.0	24.4	27.1	24.7	27.1	25.1	25.1	25.2	27.9	15.0	22.2	30.1	23.5
5	21.4	23.0	24.8	21.7	19.7	27.4	16.4	21.0	20.8	20.2	20.2	16.2	20.8	23.4	22.2	20.3	24.5	28.2	22.6	21.2	27.3	24.1
6	17.6	23.0	22.1	24.1	22.0	20.8	16.9	10.8	13.2	16.5	16.8	17.9	18.5	25.8	20.2	20.6	18.0	21.7	13.8	20.6	25.2	20.5
7	18.9	20.0	15.7	15.2	18.3	19.9	9.2	10.2	13.9	12.6	15.6	18.9	23.2	14.7	15.5	13.7	12.2	15.6	15.1	14.8	18.9	12.8
8	13.3	16.7	13.4	13.5	14.1	15.8	4.6	9.9	13.0	12.9	11.8	13.1	14.3	14.4	12.9	13.0	20.0	8.2	11.2	14.6	9.5	12.3
9	13.1	4.4	11.0	11.5	13.8	12.5	8.2	5.6	7.1	16.2	3.6	9.1	14.4	9.2	12.2	6.1	9.9	7.5	3.8	10.3	9.1	16.2

Mean Water Temperature (deg. C)

Week	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
1	26.5	25.2	28.0	26.5	24.3	27.2	28.0	25.5	26.9	27.9	26.9	24.0	24.5	25.1	28.5	24.6	26.0	26.0	26.8	26.0	27.0	27.9
2	27.0	26.1	28.4	26.9	27.2	26.3	26.4	24.5	26.7	29.7	29.4	26.4	25.8	26.5	27.6	27.0	27.2	27.5	27.0	26.8	27.4	30.1
3	27.9	25.4	28.4	27.4	25.5	25.8	25.0	24.0	26.1	28.0	28.0	25.8	25.8	26.5	27.5	23.8	27.9	27.4	28.5	26.4	28.6	26.3
4	25.6	23.9	23.6	22.2	25.2	25.4	24.7	23.4	26.0	25.3	25.4	26.3	24.0	26.8	24.8	23.3	27.0	26.8	23.6	25.5	27.6	24.3
5	22.3	22.6	24.0	21.5	23.6	24.5	21.1	23.0	25.3	21.1	23.0	20.8	23.0	20.4	24.7	19.6	25.1	25.0	23.7	21.4	26.2	23.5
6	19.8	21.5	21.1	22.0	22.1	19.6	19.5	16.5	18.5	21.7	20.3	20.6	20.9	25.1	20.4	19.5	20.5	23.1	20.6	20.2	25.9	21.1
7	19.0	19.1	14.4	17.7	17.4	18.8	15.1	13.9	17.2	18.1	19.8	15.9	20.1	19.0	15.5	16.1	14.4	20.1	18.1	15.6	16.0	16.7
8	15.6	15.9	13.2	14.0	16.4	18.2	12.3	12.6	14.9	16.5	17.2	11.5	13.2	16.0	13.8	12.1	17.6	15.6	14.1	14.6	12.0	12.9
9	13.7	11.5	9.6	11.0	13.4	13.7	10.0	10.0	11.3	16.2	12.7	8.1	13.8	11.6	11.8	8.8	12.3	11.0	9.5	9.3	11.3	11.2

Mean Salinity (ppt)

Week	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
1	5.8	4.5	6.0	7.4	4.4	11.9	7.5	3.0	6.2	6.0	5.6	0.6	6.1	4.0	5.1	1.6	4.2	8.3	3.9	6.5	3.5	1.9
2	4.5	4.8	6.8	6.5	7.4	5.8	8.4	3.9	9.3	3.9	5.5	2.2	6.7	3.3	8.6	1.2	7.1	8.0	3.7	2.6	4.9	1.1
3	3.7	2.6	7.2	6.1	5.9	4.9	7.7	0.8	6.1	7.0	6.2	4.2	5.3	6.8	8.1	2.0	7.5	9.7	1.1	1.3	6.1	5.3
4	3.9	2.5	6.9	6.3	8.6	3.4	7.8	4.7	6.9	3.9	8.8	3.7	7.2	4.8	9.6	1.7	8.5	9.5	5.9	0.7	7.7	5.3
5	7.1		4.5	5.8	7.1	6.7	8.1	5.8	5.1	6.2	9.1	4.7	6.9	7.9	8.6	3.5	9.0	10.9	3.2	0.4	6.8	4.0
6	6.0	4.3	3.8	5.0	7.4	5.1	6.4	6.3	4.4	5.5	9.6	2.6	6.2	6.3	1.5	2.9	8.3	9.2	1.6	0.2	7.7	5.1
7	2.6	5.0	3.5	5.0	3.2	6.0	6.8	5.1	4.5	4.0	8.0	5.3	6.6	5.6	3.3	6.7	9.6	8.7	1.7	5.1	0.2	3.0
8	3.8	4.6	5.8	5.4	5.4	2.4	7.0	3.1	4.7	5.4	2.3	1.5	8.2	4.8	3.9	7.1	8.0	7.3	0.7	4.2	0.8	0.6
9	5.7	5.4	2.2	6.4	3.7	3.7	6.4	4.4		6.8	0.6	0.3	6.1	5.6	1.9	6.5	9.1	5.0	0.6	5.0	1.0	0.2

Mean Dissolved Oxygen (mg/L)

WEEK	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
1			7.1	7.4	9.9	7.4	8.6	9.1	9.2		8.3			8.4	6.2		5.8	6.3	6.8	6.5	7.2	6.7
2			9.3	8.1	8.1	8.0	8.9	8.2	7.6	7.2				7.4	6.5	6.5	5.2	6.3	5.9	7.6	8.16	8.0
3			7.4	10.2	8.7	7.9	6.3	7.6	9.0	7.7	8.3			6.7	5.6	7.4	4.8	6.8	8.7	7.7	7.12	6.9
4			7.6		8.3	7.4	8.5	9.1	7.0	7.8	7.5			7.2	5.2	7.4	5.4	6.9	5.5	6.7	8.08	5.5
5			8.6	8.0	8.2		7.8	8.9	7.2	7.9	8.9			7.1	4.4	6.5	6.1	6.1	7.3	11.4	6.2	6.3
6			8.6	9.6	7.4	9.6	9.3	9.4	8.5	7.7	6.3				4.8	7.3	4.6	6.0	7.0	9.4	7.29	6.8
7			9.7	9.9	8.5	8.4	9.2	9.8	9.0	8.3	5.1				4.1	6.9		6.0	7.0	8.5	7.8	7.4
8			7.8	9.3	8.3	9.1	9.6	9.2	8.7	8.2	5.9				4.5	9.0	5.6	7.4	7.9	9.5	8.22	8.3
9			8.3	9.4	9.1	8.8	10.2	9.3		8.0	6.2				5.0	8.8	7.2	8.2	9.0	10.5		8.9

TABLE 3 2006 HUDSON RIVER SPECIES COMPOSITION

Species	Age*	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	Total Weeks 4 - 9	Total Weeks 1 - 9	CPUE Weeks 1 - 9	CPUE Weeks 4 - 9
Diadromous														
Alewife	99	3	0	16	0	0	0	0	10	1	11	30	0.14	0.07
American eel	99	6	5	3	0	2	3	3	2		10	24	0.11	0.07
American shad	99	0	6	2	0	4	0	0	1	1	6	14	0.06	0.04
Atlantic tomcod	99	0	0	0	0	0	2	0	0		2	2	0.01	0.01
Blueback herring	99	0	37	16	0	0		4	25	6	35	88	0.40	0.24
Striped bass	0	214	211	576	344	448	258	89	48	45	1232	2233	10.10	8.32
Striped bass	1	13	6	10	13	9	6	1	1	1	31	60	0.27	0.21
Estuarine														
Fourspine stickleback	99	0	0	0	0	1	0	0	1	1	3	3	0.01	0.02
Hogchoker	99	9	6	13	0	9	1	0	0	0	10	38	0.17	0.07
Killifish spp.	99	45	53	10	7	4	272	194	9	5	491	599	2.71	3.32
Threespine stickleback	99	0	0	0	1	0	0	0	0	0	1	1	0.00	0.01
White perch	0	28	43	291	162	158	71	24	13	3	431	793	3.59	2.91
White perch	1	313	210	397	190	155	766	47	6	14	1178	2098	9.49	7.96
Freshwater														
Bluegill	99	1	0	0	0	0	0	0	1	0	1	2	0.01	0.01
Brown bullead catfish	99	1	1	4	0	0	0	1	0	0	1	7	0.03	0.01
Carp	99	1	0	0	0	0	2	0	1	2	5	6	0.03	0.03
Gizzard shad	99	0	0	0	2	0	0	0	1	0	3	3	0.01	0.02
Largemouth bass	99	0	0	0	0	0	1	0	0	0	1	1	0.00	0.01
Pumpkinseed	99	1	0	8	1	2	0	1	0	0	4	13	0.06	0.03
Smallmouth bass	99	0	0	3		2	0	1	0	1	4	7	0.03	0.03
Spottail shiner	99	3	2	4	1	4	0	2	3	30	40	49	0.22	0.27
Tesselated darter	99	1	0	0	1	0	0	0	0	0	1	2	0.01	0.01
White catfish	99	0	0	3	2	1	0	0	0	0	3	6	0.03	0.02
White crappie	99	2	0	0	0	0	0	0	0	0	0	2	0.01	0.00
Yellow perch	99	0	0	2	0	0	0	0	0	0	0	2	0.01	0.00
Marine														
Atlantic croaker	99	110	28	3	1	1	1	0	0	0	3	144	0.65	0.02
Atlantic menhaden	0	22	21	278	74	39	64	4	30	2	213	534	2.42	1.44
Atlantic menhaden	1	2305	0	139	2	190	0	0	0	0	192	2636	11.93	1.30
Atlantic needlefish	99	8	8	11	3	4	0	0	0	0	7	34	0.15	0.05
Bay anchovy	99	163	2	3267	1135	2646	1429	27	451	0	5688	9120	41.27	38.43
Bluefish	0	11	4	19	18	36	15	1	1	0	71	105	0.48	0.48
Crevalle jack	99	1	0	0	0	7	0	0	0	0	7	8	0.04	0.05
Naked Goby	99	0	0	1	0	2	0	0	0	0	2	3	0.01	0.01
Northern kingfish	99	0	0		2	2	0	2	0	0	6	6	0.03	0.04
Northern pipefish	99	6	1	3	5	12	20	11	3	0	51	61	0.28	0.34
Silverside spp.	99	44	13	679	536	1045	806	289	38	3	2717	3453	15.62	18.36
Spot	99	5	6	0	0	0	0	0	0	0	0	11	0.05	0.00
Striped mullet	99	0	7	0	7	0	0	0	0	0	7	14	0.06	0.05
Striped searobin	99	0	0	0	1	0	0	0	0	0	1	1	0.00	0.01
Summer flounder	99	1	0	0	0	0	0	0	0	1	1	2	0.01	0.01
White mullet	99	26	0	0	1	0	0	2	0	0	3	29	0.13	0.02
Winter flounder	0	0	0	0	2	3	1	2	0	0	8	8	0.04	0.05
Total Fish Catch		3343	670	5758	2511	4786	3718	705	645	116	12481	22252		
Invertebrate														
Blue crab	0	16	2	9	36	119	33	32	36	4	260	287	1.30	1.76
Blue crab	1	44	32	2	14	14	10	3	0	0	41	119	0.54	0.28
Total Invertebrate Catch		60	34	11	50	133	43	35	36	4	301	406	1.84	
Number of seines (n)		24	24	25	25	25	25	25	24	24	148	221		

* 0=Young-of-the-year; 1=Older; 99=age unknown

TABLE 4 HUDSON RIVER TOTAL SPECIES CPUE 1980 - 2006, WEEKS 4 - 9

Species	Age*	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Diadromous																												
Alewife	99	1.1	55.6	1.1	1.1	0.3	0.8	1.6	0.4	2.8	0.4	0.4	0.1	0.0		0.4	0.0	0.0	0.5	0.1	4.4	0.4	0.1	0.1	1.1	0.3	0.1	0.1
American eel	99	0.2	0.5	0.9	0.8	0.8	0.4	0.2	0.5	0.6	0.4	0.4	0.4	0.2	0.1	0.2	0.2	0.2	0.5	0.1	0.3	0.1	0.1	0.2	0.2	0.1	0.1	0.1
American shad	99	4.4	22.1	9.2	17.5	9.1	10.5	27.1	8.0	8.8	11.5	7.7	1.1	10.5	1.6	12.0	3.0	2.8	2.3	0.2	5.4	1.0	2.2	4.4	3.0	2.2	0.3	0.0
Atlantic tomcod	99	0.2	1.8	5.7	1.0	1.3	1.8	2.2	1.8	3.8	2.3	1.3	0.1	0.8	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.0	2.1	0.1		0.0
Blueback herring	99	27.7	0.2	19.9	38.1	12.6	40.8	7.7	44.7	33.6	46.8	196.6	53.6	155.6	16.1	9.1	156.7	3.0	26.4	0.1	98.4	2.1	1.9	12.1	6.5	1.4	63.9	0.2
Striped bass	0	23.9	21.4	30.5	48.0	37.1	3.8	6.1	60.7	52.3	41.9	38.0	6.9	17.3	26.5	28.5	27.4	14.7	50.3	22.9	52.5	7.8	91.2	21.5	35.0	14.3	35.0	8.3
Striped bass	1	1.4	0.4	0.8	0.2	0.5	0.6	0.3	0.1	0.8	0.6	0.4	0.7	0.8	0.6	0.2	1.0	0.4	0.6	0.9	0.5	0.7	0.6	1.1	0.3	0.2	0.1	0.2
Striped bass (hatchery)	0				0.1	0.3	1.1	1.7	0.5	0.4	0.6			0.3	0.5	0.1	1.4											
Striped bass (hatchery)	1						0.0	0.0	0.0	0.0					0.0		0.0	0.0										
Estuarine																												
Fourspine stickleback	99	0.2	0.5	0.6	0.7	0.4	1.8	1.2	2.6	1.2	0.1	0.2	0.1	0.0		0.0		0.0	0.3	0.2					0.3		0.0	0.0
Hogchoker	99	0.3	0.4	2.0	4.6	1.4	2.7	2.3	0.9	1.8	1.9	1.2	0.6	0.8	0.7	1.6	0.7	0.3	0.6	0.4	0.0	0.1	0.0	0.6	0.1	0.2	0.0	0.1
Killifish spp.	99	4.9	9.5	16.1	12.2	5.6	18.4	8.8	18.9	19.8	2.8	4.9	0.7	0.7	0.1	2.2	1.4	0.1	5.0	1.9	0.3	0.9	3.4	6.8	2.3	8.6	1.8	3.3
Striped anchovy	99			0.5				0.0		0.0			0.0	0.2	0.0	0.0	0.0	0.0						0.0	0.0			
Threespine stickleback	99	0.1			0.0				0.3																0.0	0.2	0.0	0.0
White perch	0	54.4	50.9	107.1	40.8	28.0	11.0	40.5	11.4	80.3	33.2	7.0	2.0	3.8	2.3	6.4	2.3	2.4	1.9	4.1	20.8	3.1	25.9	7.8	19.2	1.8	2.5	2.9
White perch	1	3.6	13.1	70.1	45.4	41.3	11.3	12.9	8.0	12.3	9.8	7.8	6.5	4.6	6.7	4.2	3.7	4.4	6.9	10.2	2.5	5.0	3.0	11.2	5.8	1.5	0.5	8.0
Freshwater																												
Black crappie	99										0.0										0.0							
Bluegill	99	0.1		0.0	0.1	0.4	0.1	0.6	0.4	0.2	0.2	0.1	0.0		0.0	0.1	0.1	0.0	0.2		0.0	0.3	0.0	0.7	0.0	0.0	0.1	0.0
Brown bullead catfish	99		0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		0.0			0.1	0.0			0.0	0.1		0.0
Carp	99	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.2		0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0
Chain pickerel	99	0.0									0.0	0.0			0.0							0.0						
Fallfish	99											0.0																
Gizzard shad	99	0.0	0.1		0.1	0.1	0.0		0.3	0.0	0.0	0.0	0.1			0.0	0.1		0.2		0.1	0.2		0.1	0.1	0.1	0.0	0.0
Golden shiner	99	0.3	0.1	0.1	0.1	0.2					0.0	0.0	0.0			0.0					0.0		0.1			0.0		
Goldfish	99	0.0			0.0	0.0		0.0		0.0				0.0														
Hickory shad	99							0.0			0.0															0.5		
Johnny darter	99	0.0			0.5	0.2																						
Largemouth bass	99	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0		0.0						0.0	0.0		0.0
Longnose sucker	99																									0.0		
Pumpkinseed	99	3.2	1.4	3.6	1.7	1.4	0.3	0.2	0.1	0.1	0.2	0.2	0.0		0.0	0.1	0.0	0.0	0.4	0.0	0.1	0.1	0.3	0.0	0.1	0.1	0.1	0.0
Redbreast sunfish	99	0.7	0.2	0.4	0.3	0.2	0.0	0.0	0.0	0.0	0.1	0.0							0.6				0.0		0.0			
Redear sunfish	99		0.0																									
Smallmouth bass	99											0.0							0.0					0.0	0.0	0.0	0.0	0.0
Spottail shiner	99	0.3	0.2	0.8	1.9	1.9		0.0	0.0	0.3	0.5	0.3	0.0	0.0		0.2	0.0	0.1	2.0	0.5		0.1	0.0		0.2	0.1	0.0	0.3
Tesselated darter	99	0.0	0.0	0.1		0.2	0.0	0.0	0.4	0.0	0.1	0.2	0.0	0.0	0.1	0.1	0.0	0.1	0.9	0.4	0.0	0.0	0.3	0.0	0.3	0.1	0.0	0.0
White catfish	99	0.0	0.1	0.2	0.8	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		0.0		0.0		0.0
White crappie	99																											0.0
White sucker	99	0.1	0.3	0.0	0.0	0.0		0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0				0.0						
Yellow perch	99	0.2	0.1	0.2	0.1	0.0			0.0		0.0	0.0						0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Invertebrates																												
Blue crab	0		0.0	0.2			0.1			2.1		0.0	0.3		0.5	0.3	0.4	0.2	12.5	30.1	17.4	0.2	2.5	1.5	0.3	0.4	1.8	1.8
Blue crab	1		0.0	0.2	0.0		0.1			0.0			0.0		0.1	0.2	0.1	0.3	0.2	1.8	1.0	0.3	0.3	0.9	0.1	0.2	0.2	0.3
Blue crab	99	0.0	0.5	0.2	0.0	0.5	0.9	0.3	1.9	3.0	2.7	2.2	8.2	2.9	0.8	0.7	1.3	0.0	1.1									
Clam	99												0.2	0.0						0.0				0.7				
Mudcrab	99															0.0			0.0	0.0	0.1							
Marine																												
Atlantic croaker	99																								0.0	0.4		0.0
Atlantic menhaden	0		0.0	0.6		0.2						0.0							0.0		12.3	50.8	0.2	0.9	2.3	63.6	3.6	1.4
Atlantic menhaden	1	0.2		0.1																	0.0			8.1	0.1			1.3
Atlantic menhaden	99	0.5	7.0	0.3	4.0	0.0	1.3	8.6	6.3	0.1	0.2	7.5	0.2	4.2	0.1	4.2	0.1	0.5	0.1	21.7	117.3							
Atlantic needlefish	99	0.3	0.3	0.7	0.1	0.0	1.1	0.1	0.3	0.3	0.7	0.6	0.1	0.1		0.1	0.1	0.0	1.9	0.1	0.0	0.0		0.0	0.0	0.0	0.1	0.0
Atlantic threadfin	99										0.0																	
Bay anchovy	99	5.2	2.0	7.2	51.3	111.6	26.8	0.9	53.6	33.5	94.7	6.5	11.2	35.0	6.7	40.7	75.6	31.3	35.0	32.5	6.4	15.5	2.3	16.3	15.4	1.1	14.0	38.4
Bluefish	0	2.2	2.7	3.0	2.5	1.2	2.4	2.2	0.9	3.6	1.3	1.5	0.6	0.7	0.7	0.8	1.5	0.4	1.3	1.2	15.0	0.2	4.8	2.2	0.6	0.3	0.5	0.5
Bluefish	1				0.0							0.0					0.0											
Butterfish	99	0.0	0.0		0.0						0.1							0.0						0.0				
Butterflyfish	99																					0.0						
Cornetfish, bluespotted	99	0.0																										
Crevalle jack	99	0.0	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.2	0.1	0.2	0.1	0.0	0.1	0.1	0.1	0.1		0.1	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Cunner	99									0.0																		
Grey snapper	99	0.0					0.0									0.0	0.0											
Houndfish	99										0.0																	
Inshore lizardfish	99		0.0	0.0			0.1				0.0		0.1	0.1	0.0				0.0	0.0	0.0		0.0	0.0				
Lookdown	99	0.0		0.0			0.0				0.0				0.0						0.0				0.0			
Naked Goby	99						0.0	0.1	0.3	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.1		0.1	0.1	0.2	0.0	0.2	0.1	0.0	0.0	0.0	0.0
Northern kingfish	99	0.0	0.0	0.1	0.0	0.0	0.3	0.0	0.0	0.2	0.1	0.0	0.2	0.2	0.2	0.1	0.1	0.0	0.4	0.3	0.0		0.1	0.3	0.0		0.0	0.0
Northern pipefish	99	0.5	1.0	1.5	1.0	1.1	2.3	0.9	1.7	4.4	1.9	1.4	1.2	0.6	0.8	0.4	1.5	0.2	4.0	1.5	0.7	0.1	2.4	1.2	0.4	0.0	0.5	0.3
Northern puffer	99		0.0	0.0	0.0		0.0		0.0						0.0		0.0		0.0	0.0	0.0		0.1				0.0	
Northern searobin	99						0.0																					
Northern sennet	99						0.0																					
Northern stargazer	99									0.0			0.0		0.0				0.1		0.0			0.0			0.0	
Northern tonguefish	99												0.0															
Oyster toadfish	99																		0.0									
Permit	99																			0.0								
Pigfish	99															0.0			0.0									
Pinfish	99															0.0												
Silver perch	99			0.0			0.0			0.0			0.1	0.1	0.4	0.5	1.3	0.1	0.1	0.0		0.0				0.0		
Silverside spp.	99	6.5	14.4	9.9	9.0	2.2	24.1	98.2	16.9	152.2	8.1	73.4	41.2	54.5	69.7	146.1	198.0	62.9	148.7	127.6	72.1	60.2	91.3	85.2	22.9	41.0	94.7	18.4
Smallmouth flounder	99												0.1		0.0				0.0									
Spanish mackerel	99										0.0	0.0	0.0		0.0													
Spot	99			0.3	0.0		0.0	0.0		1.1	0.0	0.0	0.0		0.1	0.0		0.0			0.0	0.0			0.0		0.0	0.0
Spotfin butterflyfish	99																							0.0				
Spotfin mojarra	99													0.0		0.0				0.0								
Spotted hake	99												0.0						0.0	0.0								
Striped mullet	99	0.0	0.0	0.3	0.4	0.2	0.0	0.1	0.0				0.0								0.0		0.0	0.1	0.0		0.0	0.0
Striped searobin	99	0.0		0.1	0.0	0.0	0.1				0.0		0.1	0.0	0.1		0.0		0.4	0.2	0.0			0.0			0.0	0.0
Summer flounder	99	0.1	0.0	0.1	0.0	0.0	0.1	0.3	0.0		0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.1		0.0	0.0	0.0		0.1	0.0	0.1		0.0
Tautog	0							0.1	0.0	0.2		0.0		0.0					0.1	0.0			0.2			0.0		
Tautog	1							0.0	0.0	0.3		0.0	0.1						0.0				0.1					
Tautog	99	0.0	0.3	0.1		0.0	0.0			0.1																		
Weakfish	99	0.0	0.0	0.0	0.1	0.0	0.4	0.0		0.0	0.0	0.1	0.1	0.0		0.0			0.1	0.0				0.0	0.0			
White mullet	99	0.1	0.0	0.1	0.1	0.0	0.1	0.1		0.1	0.1	0.1	0.0		0.1	0.0			0.0	0.0	0.0			0.0		0.0		0.0
Windowpane flounder	99									0.0		0.0				0.0												
Winter flounder	0	0.0		0.0				0.8	0.3	1.0	0.4	0.7	0.5	0.9	0.9	0.6	0.2	0.2	1.6	0.6	0.2	0.2	0.3	0.3	0.2	0.3		0.1
Winter flounder	1			0.0							0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0	0.0		
Winter flounder	99	0.0	0.3	0.9	0.3	0.2	2.7	0.0		0.0		0.0	0.0				0.0	0.0	0.0		0.0							
Reptiles																												
Diamondback terrapin	99						0.0	0.0				0.0						0.0										
Painted turtle	99									0.0																		
Number of samples (n)		150	132	143	148	146	146	147	150	145	150	142	140	146	150	146	147	134	139	127	104	136	135	137	147	145	148	148

TABLE 5 HUDSON RIVER TOTAL SPECIES CPUE 1985 - 2006, WEEKS 1 - 9

Species	Age*	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Diadromous																							
Alewife	99	1.3	1.4	0.8	2.5	0.5	0.7	0.1	0.0		0.4	0.4	0.2	3.3	0.1	2.7	0.3	0.3	0.7	2.0	0.4	2.2	0.1
American eel	99	0.6	0.3	0.5	0.8	0.5	0.6	0.5	0.4	0.2	0.3	0.3	0.2	0.4	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.1	0.1
American shad	99	10.1	22.3	6.8	11.5	11.9	11.2	1.0	12.0	2.2	10.3	2.2	8.3	11.0	0.4	3.9	0.8	1.9	3.3	4.4	1.8	0.7	0.1
Atlantic sturgeon	1																			0.0			
Atlantic tomcod	99	1.9	1.7	1.2	2.6	1.6	1.3	0.1	1.4	0.0	0.1	0.0	0.5	0.2	2.3	0.0	0.6	0.6	0.0	1.4	0.2		0.0
Blueback herring	99	28.3	6.2	32.2	27.8	38.0	139.8	35.1	104.6	10.7	6.3	104.2	29.7	19.1	0.1	59.9	1.4	1.5	7.9	8.0	1.2	43.8	0.4
Striped bass	0	4.6	8.7	82.9	70.4	59.5	58.0	15.2	26.6	55.9	43.5	33.7	21.3	59.0	33.7	57.7	22.9	77.4	22.2	72.6	16.4	35.0	10.1
Striped bass	1	0.9	0.2	0.1	0.7	0.7	0.4	0.8	0.8	0.6	0.3	1.2	0.5	0.5	0.7	0.7	0.8	0.8	0.9	0.3	0.5	0.1	0.3
Striped bass (hatchery)	0	0.9	1.2	0.6	0.3	0.4			0.2	0.3	0.1	0.9											
Striped bass (hatchery)	1	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0	0.0										
Estuarine																							
Fourspine stickleback	99	1.3	0.9	2.0	1.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.3	0.1		0.0			0.2	0.1	0.0	0.0
Hogchoker	99	6.1	3.7	2.5	4.0	7.0	2.4	1.6	3.1	1.3	2.4	2.5	0.5	0.7	0.3	0.4	0.1	0.3	1.7	1.5	0.3	0.2	0.2
Killifish spp.	99	14.1	6.8	15.3	18.8	3.8	5.0	2.4	0.7	0.8	1.6	3.6	0.3	4.9	2.4	1.8	0.6	2.4	5.5	10.1	9.2	3.7	2.7
Rainbow smelt	99				0.0																		
Striped anchovy	99		0.0	0.0	0.0			0.0	0.1	0.0	0.0	0.0	0.0						0.1	0.0			
Threespine stickleback	99			0.2										0.0						0.0	0.1	0.0	0.0
White perch	0	8.9	37.9	11.5	75.8	33.8	7.5	2.3	5.5	3.7	6.1	1.9	2.9	1.5	4.1	22.5	6.3	21.8	11.4	25.6	2.0	1.9	3.6
White perch	1	20.5	28.9	15.7	20.2	26.7	10.8	9.8	6.4	7.7	7.8	11.1	7.3	5.6	9.7	7.0	16.2	20.3	20.1	8.2	3.7	1.4	9.5
Freshwater																							
Black crappie	99					0.0				0.0						0.0							
Bluegill	99	0.0	0.4	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.2	0.0	0.0	0.3	0.0	1.4	0.1	0.0	0.1	0.0
Brown bullead catfish	99	0.0	0.0	0.0	0.0	0.5	0.1	0.0	0.0		0.0		0.0	0.0		0.0	0.1	0.0	0.0	0.2	0.1		0.0
Carp	99	0.2	0.2	0.2	0.2	0.3	0.3		0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0
Chain pickerel	99					0.0	0.0	0.0		0.0							0.0						
Fallfish	99						0.0																
Gizzard shad	99	0.0		0.2	0.0	0.0	0.0	0.1			0.0	0.1	0.0	0.1		0.1	0.3		0.1	0.1	0.1	0.0	0.0
Golden shiner	99		0.0			0.0	0.0	0.0			0.0		0.0			0.0		0.1		0.0	0.0		
Goldfish	99	0.0	0.0	0.0	0.0	0.0			0.0			0.0			0.0								
Green sunfish	99																			0.0			
Hickory shad	99		0.0			0.0															0.3	0.0	
Largemouth bass	99		0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0		0.0
Longnose sucker	99																				0.0		
Pumpkinseed	99	0.3	0.2	0.1	0.1	0.1	0.1	0.0		0.0	0.1	0.2	0.0	0.3	0.0	0.0	0.1	0.2	0.0	0.1	0.1	0.1	0.1
Redbreast sunfish	99	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0		0.0	0.0		0.4			0.0	0.0	0.0	0.0			
Smallmouth bass	99						0.0							0.0				0.0	0.0	0.0	0.0	0.0	0.0
Spottail shiner	99	0.0	0.0	0.0	0.3	1.3	0.4	0.1	0.0	0.0	0.2	0.1	0.2	1.9	0.6	0.1	0.2	0.1	0.0	0.6	0.1	0.0	0.2
Tesselated darter	99	0.0	0.0	0.3	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.0	0.2	3.5	0.8	0.0	0.2	0.4	0.1	0.5	0.5	0.0	0.0
White catfish	99	0.1	2.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0		0.0
White crappie	99																						0.0
White sucker	99		0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0					
Yellow perch	99	0.0	0.0	0.0	0.0	0.0	0.0	0.0					0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
Invertebrate																							
Blue crab	0	0.1			1.4		0.0	0.3		0.3	0.4	0.2	0.4	11.8	24.6	14.1	0.3	1.8	2.0	0.4	0.4	1.2	1.3
Blue crab	1	0.1			0.0			0.1		0.0	0.2	0.1	0.2	0.4	2.9	2.1	0.9	0.5	1.5	0.4	0.5	0.2	0.5
Blue crab	99	1.5	0.3	1.4	3.3	3.0	2.7	6.1	5.5	0.8	0.6	1.8	0.0	1.4									
Clam	99							0.1	0.0						0.0				1.1				
Marsh crab	99													0.0									
Mudcrab	99										0.0	0.0	0.0	0.0	0.0	0.1			0.0				
Marine																							
Atlantic croaker	99																			0.0	0.3		0.7
Atlantic menhaden	0	0.0					0.0						0.0	0.0	0.0	9.5	48.8	0.5	0.7	3.6	44.6	5.8	2.4
Atlantic menhaden	1															0.0	0.0		9.6	0.1			11.9
Atlantic menhaden	99	20.9	23.5	4.8	0.9	0.8	7.8	2.8	5.7	0.1	3.5	0.3	1.9	0.3	14.7	84.0							
Atlantic needlefish	99	1.0	0.2	0.8	0.4	0.7	0.7	0.5	0.2	0.1	0.3	0.2	0.1	1.5	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.2
Atlantic threadfin	99					0.0																	
Bay anchovy	99	52.9	5.3	60.4	37.3	244.4	11.0	34.0	40.3	7.6	184.5	88.3	42.6	47.4	34.5	9.2	14.0	1.8	13.3	11.7	1.1	24.7	41.3
Bluefish	0	6.1	3.5	3.5	5.0	2.0	3.1	1.3	1.3	2.6	1.1	1.5	0.8	1.7	1.1	13.8	0.9	4.1	2.9	1.0	0.8	0.7	0.5
Bluefish	1	0.0			0.0		0.0					0.0							0.0				
Bonefish	99										0.0												
Butterfish	99					0.0				0.0	0.0		0.0						0.0				
Butterflyfish	99														0.0		0.0						
Crevalle jack	99	0.3	0.1	0.0	0.2	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.0		0.0
Cunner	99				0.0																		
Grey snapper	99	0.0		0.0							0.0	0.0									0.0		
Houndfish	99					0.0																	
Inshore lizardfish	99	0.0				0.0	0.1	0.1	0.1	0.1	0.0			0.1	0.1	0.0		0.0	0.1				
Lookdown	99	0.0				0.0	0.0			0.0						0.0			0.0	0.0			
Naked Goby	99	0.0	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.2		0.1	0.1	0.4	0.0	0.2	0.1	0.0	0.1	0.0	0.0
Northern kingfish	99	0.2	0.0	0.0	0.2	0.1	0.1	0.3	0.2	0.2	0.1	0.1	0.0	0.4	0.4	0.1	0.0	0.1	0.4	0.0	0.2	0.0	0.0
Northern pipefish	99	2.5	0.9	1.7	3.7	1.5	1.7	2.6	0.8	0.7	0.5	2.1	0.2	3.6	1.3	1.2	0.2	1.8	1.1	0.6	0.6	0.5	0.3
Northern puffer	99	0.0	0.0	0.0	0.0	0.0	0.0	0.1		0.0		0.0		0.0	0.0	0.1		0.1	0.0	0.0	0.0	0.0	
Northern searobin	99	0.0									0.0							0.0					
Northern sennet	99	0.0				0.0																	
Northern stargazer	99			0.0	0.0		0.0	0.0	0.0	0.0				0.1		0.0		0.0	0.1		0.0	0.0	
Northern tonguefish	99							0.0															
Oyster toadfish	99													0.0									
Permit	99														0.0		0.0						
Pigfish	99										0.0			0.0									
Pinfish	99										0.0												
Scup	99															0.0							
Silver perch	99	0.0			0.0			0.1	0.1	0.3	0.4	0.8	0.1	0.1	0.0	0.0	0.0				0.0		
Silverside spp.	99	21.3	69.9	20.0	116.6	7.9	55.8	147.4	50.2	90.7	191.7	171.4	65.8	126.8	120.6	90.8	68.5	93.8	104.4	20.7	65.0	105.9	15.6
Smallmouth flounder	99	0.0						0.0		0.0				0.0	0.0								
Spanish mackerel	99					0.0	0.0	0.0		0.0	0.0												
Spot	99	0.6	3.2	0.3	0.8	0.0	1.7	0.0	0.0	1.0	0.3	0.0	0.4	0.0	0.1	0.2	0.1	0.0	0.3	0.0	0.0	0.0	0.0
Spotfin butterflyfish	99																		0.0				
Spotfin mojarra	99								0.0		0.0				0.0								
Spotted hake	99							0.0						0.0	0.0								
Striped mullet	99	0.0	0.3	0.0				0.0								0.0	0.0	0.0	0.1	0.0		0.0	0.1
Striped searobin	99	0.1	0.1			0.0	0.1	0.4	0.0	0.1	0.0	0.0		0.7	0.5	0.1		0.0	0.1	0.0	0.1	0.0	0.0
Summer flounder	99	0.3	0.4	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1		0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0
Tautog	0		0.0	0.0	0.2		0.0	0.0	0.0					0.1	0.0	0.0		0.1			0.0	0.0	
Tautog	1		0.0	0.0	0.3		0.0	0.1						0.0				0.1					
Tautog	99	0.0	0.0		0.0		0.0																
Triggerfish	99	0.0																					
Weakfish	99	0.3	0.0		0.0	0.0	0.0	0.4	0.0	0.0	0.0		0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	
White mullet	99	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.1	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Windowpane flounder	99				0.0		0.0		0.0	0.0	0.0												
Winter flounder	0		0.9	0.2	0.7	0.3	0.8	0.7	1.3	1.1	0.4	0.6	0.2	1.8	0.6	0.2	0.4	0.4	0.2	0.5	0.4	0.0	0.0
Winter flounder	1					0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0	0.0		
Winter flounder	99	2.5	0.0		0.1	0.0	0.0	0.0				0.0	0.0	0.0		0.0							
Reptiles																							
Diamondback terrapin	99	0.0	0.0			0.0	0.0						0.0										
Painted turtle	99				0.0						0.0					0.0							
Number of samples (n)		216	222	225	220	225	217	215	221	225	221	221	204	194	198	173	211	208	210	222	220	221	221

* 0=Young-of-the-year; 1=Older; 99=age unknown

TABLE 6 HUDSON RIVER YOY STRIPED BASS ABUNDANCE INDEX

6 week survey

Year	Hauls	Catch	CPUE	StDev	Range	Zeros	Index	Confidence Intervals
1980	150	3586	23.91	57.47	0-547	34	6.10	4.53 - 8.11
1981	132	2830	21.44	42.37	0-346	11	8.71	6.81 - 11.08
1982	143	4362	30.50	48.02	0-285	8	14.13	11.32 - 17.57
1983	148	7108	48.03	110.69	0-1178	8	16.25	12.56 - 20.93
1984	146	5418	37.11	89.85	0-906	6	15.00	12.03 - 18.65
1985	146	562	3.85	5.72	0-31	53	1.85	1.42 - 2.36
1986	147	902	6.14	8.98	0-55	35	2.89	2.26 - 3.64
1987	150	9100	60.67	157.77	0-1333	13	15.90	11.98 - 21.01
1988	145	7584	52.30	45.10	0-205	2	33.46	27.89 - 40.10
1989	150	6291	41.94	57.84	0-537	4	21.35	17.23 - 26.41
1990	142	5392	37.97	43.50	0-240	2	19.08	15.31 - 23.72
1991	140	959	6.85	7.95	0-41	30	3.60	2.84 - 4.52
1992	146	2525	17.29	15.51	0-83	5	11.43	9.62 - 13.55
1993	150	3974	26.49	34.32	0-230	7	12.59	10.08 - 15.67
1994	146	4159	28.49	31.73	0-246	4	17.64	14.74 - 21.09
1995	147	4027	27.39	45.16	0-389	2	16.23	13.72 - 19.16
1996	134	1964	14.66	18.40	0-143	6	8.93	7.41 - 10.72
1997	139	6998	50.35	63.58	0-328	6	22.31	17.42 - 28.50
1998	127	2910	22.91	24.07	0-135	5	13.47	10.95 - 16.53
1999	104	5464	52.54	76.86	1-474	0	26.61	21.11 - 33.49
2000	136	1064	7.82	16.57	0-120	31	3.18	2.45 - 4.06
2001	135	12317	91.24	220.33	0-1711	11	22.97	16.94 - 31.01
2002	137	2949	21.53	26.74	0-203	5	12.26	10.08 - 14.88
2003	147	5141	34.97	39.16	0-209	9	17.34	13.75 - 21.79
2004	145	2078	14.33	16.47	0-121	9	8.81	7.31 - 10.59
2005	148	5181	35.01	90.24	0-797	21	8.48	6.34 - 11.25
2006	148	1232	8.30	182.31	0-448	28	3.82	3.02 - 4.78

9 week survey

Year	Hauls	Catch	CPUE	StDev	Range	Zeros	Index	Confidence Intervals
1985	216	984	4.56	6.60	0-32	73	2.15	1.73 - 2.62
1986	222	1940	8.74	11.30	0-57	39	4.27	3.53 - 5.13
1987	225	18649	82.88	184.57	0-1432	13	25.12	20.09 - 31.34
1988	220	15488	70.40	85.38	0-869	2	42.16	36.33 - 48.89
1989	225	13397	59.54	86.16	0-642	4	28.42	23.79 - 33.92
1990	217	12591	58.02	64.65	0-473	2	29.80	24.90 - 35.63
1991	215	3275	15.23	22.57	0-160	32	6.56	5.35 - 7.99
1992	221	5874	26.58	25.50	0-142	5	16.93	14.67 - 19.52
1993	225	12587	55.94	74.18	0-402	7	23.32	19.13 - 28.38
1994	221	9624	43.55	50.38	0-367	4	25.71	22.10 - 29.89
1995	221	7457	33.74	44.64	0-389	2	20.23	17.59 - 23.25
1996	204	4346	21.30	25.83	0-188	6	12.76	10.94 - 14.85
1997	194	11452	59.03	71.07	0-412	7	27.93	22.80 - 34.17
1998	198	6674	33.71	34.46	0-183	5	19.26	16.25 - 22.79
1999	173	9981	57.69	67.47	1-474	0	33.80	28.63 - 39.88
2000	211	4830	22.89	51.89	0-416	31	7.19	5.75 - 8.94
2001	208	16103	77.42	179.92	0-1711	12	26.36	21.22 - 32.70
2002	210	4656	22.17	25.60	0-203	6	13.30	11.44 - 15.44
2003	222	16116	72.59	99.03	0-626	10	31.24	25.56 - 38.13
2004	220	3613	16.42	18.48	0-121	11	9.86	8.45 - 11.47
2005	221	7727	34.96	80.27	0-797	26	10.26	8.20 - 12.79
2006	221	2233	10.1	182.31	0-576	35	4.84	4.02 - 5.79

TABLE 7 2006 HUDSON RIVER YOY STRIPED BASS CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	9	1	2	14	5	5	0	8	5	6.2	5.4
21E	23	10	2	9	16	7	1	0	1	6	5.2	5.8
17E	24	20	2	7	5	13	14	1	0	0	5.5	6.9
16E	25	4	5	6	7	2	0	4	1	2	2.7	3.4
12E	29	4	13	4	12	24	7	0	0	2	7.5	7.3
14E	29	15	20	8	8	6	3	0	0		3.4	7.5
19E	33	0	11	50	5	6	9	2	1	4	4.5	9.8
11E	34	0	0	0	0	0	1	10	0	1	2.0	1.3
9E	34	7	15	36	23	12	15	0		2	10.4	13.8
7EE	35	28	9	21	3	24	21	9	2	0	9.8	13.0
7EW	35	11	0	66	35	128	99	7	1	1	45.2	38.7
8E	35			40	47	5	12	8	3	1	12.7	16.6
3E	39											
4E	39	24	10	8	4	29	6	5	2	0	7.7	9.8
West												
15WS	27	6	3	6	0	24	0	0	1	5	5.0	5.0
16WN	27	1	5	9	5	8	3	0	2	2	3.3	3.9
14W	29	9	5	21	24	5	4	2	0	0	5.8	7.8
12W	30	21	46	25	31	17	10	11	6	1	12.7	18.7
11W	32	8	8	8	3	22	1	0	1	1	4.7	5.8
10W	35	9	4	15	6	14	1	3	0	3	4.5	6.1
9W	35	11	24	22	13	5	4	3	1	4	5.0	9.7
8W	36	11	10	51	14	20	10	7	17	0	11.3	15.6
7W	37	3	6	124	29	36	5	1	0	2	12.2	22.9
3W	39	3	8	10	10	10	7	5	0	2	5.7	6.1
4W	39	0	2	20	22	15	17	8	1	0	10.5	9.4
5W	39	0	2	8	8	11	3	3	0	1	4.3	4.0
Effort		24	24	25	25	25	25	25	24	24	148	221
Catch		214	211	576	344	448	258	89	48	45	1232	2233
C/E		8.92	8.79	23.04	13.76	17.92	10.32	3.56	2.00	1.88	8.32	10.10

TABLE 8

HUDSON RIVER YOY STRIPED BASS
CPUE BY STATION 1985 - 2006, WEEKS 1 - 9

STATION	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
East																						
18E	0.1	3.3	64.2	56.0	30.5	35.8	7.3	21.5	66.5	39.5	34.7	18.3	41.4	26.8	22.2	13.2	45.9	21.3	115.5	11.3	58.7	5.4
21E		1.0	70.3	23.5	111.8	70.0	1.0	24.6	89.8	42.3	59.4	46.1	26.1	44.4	38.6	12.2	27.3	9.6	106.4	22.6	54.2	5.8
17E	0.1	8.3	45.7	96.4	157.7	97.6	13.8	21.7	61.8	61.6	34.2	18.0	27.5	48.6	48.2	12.3	30.1	18.0	81.8	16.2	44.9	6.9
16E		3.0	135.0	50.1	34.5	42.6	4.7	17.0	50.7	26.6	38.7	14.3	23.2	38.8	37.8	4.6	30.1	6.2	44.1	13.2	14.6	3.4
15E		8.0	29.0	38.0	51.3	45.6	6.3		73.6				48.0	80.0	126.0	7.0						
12E	1.9	1.9	35.4	49.7	36.5	39.8	0.9	18.4	57.3	29.9	31.1	11.3	10.9	21.0	51.9	11.0	9.6	8.0	50.6	7.8	18.1	7.3
13E	3.7	4.5	93.3	14.5	12.5	31.0	24.2	19.7	55.6	14.3	82.3	13.0	44.4	22.3	47.5	4.6	24.5	26.4	58.5	61.0		
14E	0.1	9.1	37.0	78.4	96.6	67.6	2.7	37.7	35.1	44.0	33.4	20.0	41.1	58.5	48.8	22.7	36.5	27.8	126.1	8.8	17.0	7.5
19E	1.6	6.0	259.5	88.8	67.6	33.1	7.0	19.8	33.1	59.7	31.8	16.5	100.4	30.4	15.2	16.0	57.8	12.8	70.8	12.0	58.5	9.8
10E	1.0																					
11E	6.0	9.8	319.9	128.3	45.3	28.0	36.0	37.3	73.3	51.0	129.4	29.3	124.8	69.6	79.5	79.1	159.2	25.8	115.6	23.0	28.1	1.3
9E	1.0	6.0	47.4	37.0	42.9	57.3	17.0	35.5	73.0	55.8	14.8	23.2	54.1	40.7	92.5	18.2	50.3	15.9	124.2	24.1	53.9	13.8
7E1		10.0	54.0		1.0	17.5				149.0												
7EC	15.5																					
7EE	4.9	12.9	222.0	54.3	58.0	30.1	9.0	13.9	65.1	26.4	17.1	19.0	54.1	11.8	35.1	34.8	193.3	50.5	41.8	19.3	76.6	13.0
7EW	5.7	10.8	358.7	66.3	99.7	52.5	7.9	26.5	57.3	28.1	42.7	12.3	31.6	27.7	35.6	51.7	231.0	21.3	39.5	15.1	188.4	38.7
8E	1.2	5.0		29.0		15.3	7.0		85.3	90.0	13.3	34.7	122.4	54.0	85.3	131.1	266.3	51.9	168.0	14.8	45.3	16.6
6E	1.3	1.8	38.9	51.8	31.0																	
3E	4.3	4.9	46.9	29.9	24.4	21.9	6.7	13.1	17.4	46.8	17.8	8.9	96.6	22.1	60.0	12.9	118.1	18.5	43.0	9.0	38.2	
4E	7.9	6.4	38.0	42.3	30.4	40.3	15.0	27.8	33.2	21.6	13.3	16.7	78.6	18.3	47.3	7.8	213.4	25.4	40.0	8.5	8.3	9.8
5E	5.0	18.3	9.0	25.8	26.0	34.0	16.0	13.5	186.0	11.0	10.5	22.3	28.0									
20E	8.0																					
West																						
15WN	0.7		63.3	32.3	53.3	53.5	3.0	32.5	11.0	105.0												
15WS	3.9	7.1	145.8	109.8	63.0	159.6	45.8	32.4	80.6	57.9	22.8	8.1	153.8	56.6	149.0	13.9	48.3	17.0	98.1	3.8	42.2	5.0
16WN	3.9	15.3	53.1	89.6	62.2	162.4		22.2	48.4	11.0	20.2	5.1	79.5	15.0	81.6	5.2	63.8	12.8	60.1	9.1	20.0	3.9
16WS	3.0	16.3	20.0	149.5	25.3	82.4		6.0														
13W		16.0	25.3	21.0		3.5	20.7	13.7														
14W	4.4	10.0	93.0	65.1	55.6	64.9	40.6	20.0	76.9	24.4	26.6	12.2	36.9	29.2	54.2	19.8	70.8	19.3	75.2	10.2	21.3	7.8
12W	3.0	3.4	46.4	36.7	36.6	83.1	15.8	22.4	53.3	41.8	21.7	14.6	26.2	25.0	100.5	7.8	37.0	17.9	35.4	8.3	14.2	18.7
11W	2.6	4.9	18.7	42.8	11.2	7.0	11.6	11.9	28.7	39.9	31.1	37.4	4.0	22.0	78.6	20.4	39.2	16.9	35.7	18.2	11.9	5.8
10W	4.0	2.8	24.3	37.1	41.5	47.9	14.0	25.6	55.1	29.0	18.3	18.2	53.4	16.3	33.6	18.3	34.6	21.7	61.8	29.1	6.9	6.1
9W	5.1	6.4	25.4	96.5	37.4	39.5	6.6	21.1	20.9	32.3	20.3	12.3	41.3	30.1	26.6	11.2	20.0	12.8	44.6	14.9	5.2	9.7
8W	8.4	15.8	35.6	127.8	137.9	95.3	26.1	69.0	87.3	83.2	34.5	34.1	42.9	28.6	44.7	6.0	34.2	29.7	77.1	41.4	18.4	15.6
7W	10.6	15.7	65.7	114.1	56.6	71.0	20.9	59.5	43.2	74.2	35.6	54.3	68.3	14.3	45.8	17.5	52.0	37.6	121.1	32.0	37.1	22.9
3W		5.7																			22.6	6.1
4W	15.8	20.1	71.4	93.9	143.8	80.6	23.4	28.6	38.8	27.8	35.1	31.3	97.7	37.3	51.8	33.7	87.0	30.8	33.0	25.0	16.9	9.4
4WN																						
5W	10.6	18.1	43.1	64.8	63.8	54.1	27.1	26.2	46.8	33.2	34.6	25.3	78.0	42.7	49.5	22.6	46.9	18.2	42.0	18.0	24.8	4.0
20W	11.0																					
Annual C/E	4.6	8.7	82.9	70.4	59.5	58.0	15.2	26.6	55.9	43.5	33.7	21.3	59.0	33.7	58.0	22.9	77.4	22.2	72.6	16.4	35.0	10.1

TABLE 9 HUDSON RIVER YOY STRIPED BASS CPUE BY STATION 1980 - 2006, WEEKS 4 - 9

STATION	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
East																											
18E	13.5	30.8	24.2	36.7	23.1	0.2	2.6	27.8	68.3	36.0	15.0	2.6	17.3	39.0	23.4	31.2	12.0	31.7	7.8	23.7	3.2	41.0	7.4	74.2	12.3	18.5	4.1
21E							1.0	65.5		60.5	50.5	0.8	15.7	18.5	30.0	30.8	16.3	10.5	17.3	36.3	2.0	10.2	5.0	61.3	28.0	24.2	3.4
17E	9.5	17.6	35.3	91.7	36.8	0.2	7.0	46.5	96.3	73.3	57.6	5.8	13.0	31.7	60.3	14.0	12.3	19.2	35.5	18.3	1.0	22.2	14.5	61.0	15.2	44.0	3.7
16E	6.3	4.0	19.8	21.4	11.0		3.0		48.7	15.2	22.3	1.3	12.8	30.8	16.8	13.0	7.2	12.2	15.2	31.7	1.7	20.2	6.2	31.5	17.5	10.7	1.8
15E	24.0			302.4	52.8		8.0	29.0	38.0	10.0	10.0	6.3		12.5							5.0	44.0		39.5			
12E	2.7	3.5	8.4	24.3	10.4	2.6	1.8	17.5	29.0	20.0	21.8	1.0	17.6	13.7	8.2	14.0	10.5	9.5	12.7	60.3	3.5	10.7	9.8	23.5	6.5	7.7	5.0
13E	6.3	4.0			11.0	4.5	4.5	46.3	17.0	12.5	31.0	8.5	12.0	12.2	9.4	18.0	8.0	20.8	11.0	33.7	0.6	26.5	29.4	31.3			
14E	35.5	10.4	15.0	42.2	11.8		4.3	30.2	51.0	42.3	28.0	2.0	15.7	26.8	20.0	16.0	12.0	29.3	27.4	42.0	2.2	34.0	15.8	27.2	8.6	16.8	2.1
19E					20.7	2.0	2.8	121.8	21.3	34.2	22.8	4.8	11.5	14.8	30.5	25.4	11.3	50.0	24.2	21.7	5.8	54.3	11.2	25.7	12.2	73.2	3.0
10E																											1.3
11E		22.5	9.6	26.4	7.3	2.8	2.5	163.8	62.4	59.0	22.4	22.2	33.8	19.8	44.8	146.0	31.4	114.8	50.5	61.6	39.3	205.0	24.0	35.8	12.7	20.5	6.5
9E	3.1	6.7	8.8	5.2	6.2	0.3	0.8	33.4	33.8	22.3	50.6	7.6	17.8	21.8	16.6	14.3	20.3	52.8	44.2	76.6	18.0	62.5	22.0	62.8	29.6	44.8	
7E1							10.0			1.0	17.5					52.0											
7EC			94.0																								
7EE		22.0	88.5	48.2	146.0	0.7	6.6	274.7	41.5	50.3	28.8	6.8	6.8	90.0	16.8	16.0	12.5	61.7	10.0	30.2	8.2	286.8	63.2	35.2	11.5	98.5	6.6
7EW	19.7	10.0	66.0	35.5	215.3	2.2	5.0	406.6	37.5	106.3	54.6	8.0	23.2	57.3	25.6	47.0	10.5	36.7	33.2	27.0	17.3	327.8	12.5	39.5	13.4	219.8	30.1
8E	38.2	11.0	103.3	45.0	48.2	1.5	5.0		16.3		15.3	3.5		70.7	70.8	11.3	34.3	130.0	56.6	48.4	36.2	345.7	34.2	38.0	9.3	49.5	10.9
6E	12.7	5.5	41.5	147.0	34.3	0.5	2.3	39.7	18.5	34.8																	
3E		12.0			109.5	3.6	2.0	37.2	36.3	28.0	17.7	4.0	9.7	9.6	55.6	20.2	8.0	87.0	22.3	76.0	9.4	153.8	23.4	42.0	7.3	70.7	
4E	29.0	14.3	27.8	22.2	41.8	6.5	6.3	32.7	36.6	31.5	30.7	5.5	16.2	9.3	16.0	14.8	13.3	94.2	14.8	93.0	4.6	339.0	36.0	36.3	5.7	11.8	5.1
5E	28.5	29.8	20.7	14.5	53.0	5.0		9.0	26.0	21.0	17.0	9.2	13.5		11.0	18.0	19.0		24.0					11.5			
1E				5.0																							
West																											
15WN	39.0	9.4	16.7	36.3	42.7			21.0	28.5	53.4	47.6	3.0	16.2	11.0		26.7		16.0									
15WS	20.4	10.2	8.4	82.8	26.2	2.4	5.5	9.8	67.7	22.0	77.5	15.6	17.4	56.4	55.0	16.3	6.5	78.3	22.5	176.8	3.2	56.6	27.0	48.3	4.4	10.7	0.0
16WN	68.2	32.0	11.0	17.5	15.2	3.5	12.3	27.8	64.8	82.7	93.0		15.8	21.7	11.0	21.0	4.2	100.5	12.8	99.3	2.0	83.0	15.8	31.7	12.3	17.3	2.2
16WS	59.3	29.2	8.5	49.7	11.0	2.6	15.2	3.7	50.7	32.8	44.0		6.0														
13W	10.2	14.7	17.3					25.3	21.0		3.5	2.3	6.0														
14W	45.3	55.5	17.8	33.3	4.2	5.3		71.5	58.2	36.7	39.6	9.5	8.3	30.7	16.8	18.2	8.8	25.5	23.3	48.5	6.7	48.8	18.7	16.3	11.3	20.8	3.9
12W	8.3	9.5	12.0	10.8	7.0	2.7	1.4	35.8	40.7	36.8	65.2	9.5	10.2	8.0	37.2	12.0	8.3	14.8	14.0	124.8	3.8	28.0	21.6	23.8	8.3	9.8	8.4
11W	137.0	9.4	12.2	8.0	5.0	2.5	2.2	12.5	45.6	13.2	6.6	7.5	13.2	17.2	32.3	23.3	10.5		37.0	101.8	5.3	37.5	18.4	19.0	16.2	11.0	3.1
10W	21.0	22.0		15.4	7.5	3.0	2.0	20.7	37.2	24.2	29.5	9.0	16.4	24.3	17.0	14.2	11.7	47.7	17.2	13.0	5.4	47.4	14.6	40.8	15.6	1.3	3.0
9W	27.7	61.3	13.3	16.3	12.0	5.2	5.0	24.4	86.8	30.3	36.0	4.7	18.6	15.3	13.8	21.4	6.8	45.6	5.5	15.2	3.2	20.2	11.3	26.0	13.7	5.0	3.3
8W	19.5	26.8	15.0	29.7	18.2	10.5	15.5	23.5	99.2	47.8	29.8	8.2	42.8	35.8	38.5	24.4	17.7	38.3	13.5	16.2	5.5	53.7	20.2	26.2	37.2	24.8	7.6
7W	4.0	46.3	51.0	46.5	34.3	11.3	10.0	13.2	97.2	61.5	74.6	8.5	42.8	13.8	36.8	31.5	36.5	60.2	13.7	23.0	13.0	37.3	35.8	47.7	34.5	51.8	8.1
3W	12.2	10.3	23.4	8.0			2.0																		11.2	30.2	3.8
4W	15.0	26.2	41.8	37.5	38.0	17.8	15.8	52.0	95.0	69.0	73.0	12.5	20.0	15.5	17.8	40.8	24.3	71.8	19.0	103.0	8.0	90.8	38.8	10.0	11.0	21.0	7.0
4WN																17.0											
5W	7.8	20.4	38.6	44.0	39.8	8.3	15.0	27.3	39.4	33.0	40.6	9.5	19.0	14.2	14.8	35.2	17.5	69.8	39.0	72.0	4.3	35.8	20.5	21.0	8.5	20.0	2.9
Annual C/E	23.9	21.4	30.7	48.4	37.1	3.8	6.1	60.7	52.3	41.9	38.0	6.9	17.3	26.5	28.5	27.4	14.7	50.3	22.9	52.5	7.8	91.2	21.5	35.0	14.3	35.0	8.27

TABLE 10

2006 HUDSON RIVER YOY STRIPED BASS
TOTAL LENGTH FREQUENCY

TL (mm)	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/F Weeks 4 - 9	C/F Weeks 1 - 9
<10	0	0	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	0	0	0	0
15-19	0	0	0	0	0	0	0	0	0	0	0
20-24	1	2	0	1	0	0	0	0	0	1	4
25-29	12	4	1	0	0	0	0	0	0	0	17
30-34	32	6	5	0	0	0	0	0	0	0	43
35-39	35	21	14	2	2	0	0	0	0	4	74
40-44	26	32	23	3	1	0	0	0	0	4	85
45-49	33	38	33	7	1	0	0	0	0	8	112
50-54	17	29	62	14	6	1	1	1	0	23	131
55-59	25	32	76	30	10	5	3	0	0	48	181
60-64	3	27	83	60	28	20	2	4	1	115	228
65-69	2	10	70	63	46	31	7	8	0	155	237
70-74	0	8	57	61	54	35	15	5	2	172	237
75-79	0	0	37	46	50	29	18	6	5	154	191
80-84	0	1	14	37	58	28	7	2	7	139	154
85-89	0	0	6	14	39	23	10	4	7	97	103
90-94	0	0	0	5	29	13	8	5	2	62	62
95-99	0	1	0	1	17	12	4	6	5	45	46
100-104	0	0	0	0	15	8	6	3	4	36	36
105-109	0	0	0	0	7	1	5	1	5	19	19
110-114	0	0	0	0	4	2	1	1	3	11	11
115-119	0	0	1	0	3	0	0	0	1	4	5
120-124	0	0	0	0	0	0	0	0	2	2	2
125-129	0	0	0	0	0	1	1	1	1	4	4
130-134	0	0	0	0	0	0	1	0	0	1	1
135-139	0	0	0	0	0	0	0	0	0	0	0
140-144	0	0	0	0	0	0	0	1	0	1	1
>144	0	0	0	0	0	0	0	0	0	0	0
# Measured	186	211	482	344	370	209	89	48	45	1105	1984
Mean	42.16	50.34	60.49	71.43	78.57	77.89	82.72	83.29	93.11	79.00	68.84
StdDev	9.62	11.20	11.68	10.07	13.56	12.42	15.14	17.69	15.05	23.65	23.92

TABLE 11

AVERAGE TOTAL LENGTH (mm) OF HUDSON RIVER
YOY STRIPED BASS, 1985 - 2006

YEAR		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
1985	Mean	54.23	63.53	81.55	85.44	93.37	100.91	103.68	99.84	101.39
	StdDev	7.53	11.04	12.03	12.06	13.26	11.64	16.35	12.45	16.08
1986	Mean	58.03	67.05	75.98	87.92	92.65	99.67	96.49	98.55	98.58
	StdDev	7.14	10.68	13.39	12.47	12.23	14.77	13.24	21.18	16.78
1987	Mean	47.84	59.77	67.12	72.23	80.56	85.62	84.95	87.52	84.96
	StdDev	9.51	9.56	10.40	10.59	10.70	12.04	13.37	13.59	15.29
1988	Mean	41.72	50.15	59.48	74.08	80.98	84.06	86.67	85.74	86.92
	StdDev	10.65	15.40	14.60	15.61	16.32	15.80	15.77	18.42	16.43
1989	Mean	36.02	46.20	57.37	65.27	72.37	81.12	81.05	82.14	85.05
	StdDev	9.35	9.64	10.85	11.32	11.02	12.16	12.43	12.61	14.17
1990	Mean	48.96	46.03	57.55	65.08	71.64	76.35	77.49	78.35	74.82
	StdDev	23.58	15.72	14.98	13.46	13.95	13.87	13.96	14.34	16.01
1991	Mean	62.57	71.49	82.01	89.96	97.58	100.96	101.95	93.76	97.59
	StdDev	15.53	14.33	15.01	18.51	18.52	22.94	27.32	27.56	22.76
1992	Mean	46.89	57.76	65.38	72.50	82.08	85.46	91.01	89.59	89.89
	StdDev	10.82	12.46	12.31	12.61	12.12	14.47	15.23	15.26	15.57
1993	Mean	38.13	52.73	62.11	68.62	75.84	82.95	83.99	87.50	88.59
	StdDev	8.13	11.67	12.30	13.09	12.86	14.55	12.90	15.29	19.19
1994	Mean	41.26	54.55	62.12	71.21	75.99	84.03	83.97	87.26	88.74
	StdDev	8.77	10.84	11.79	13.68	14.37	15.55	13.17	14.14	13.32
1995	Mean	42.00	62.39	69.85	77.87	87.50	94.73	100.04	99.84	90.78
	StdDev	8.94	11.21	11.39	11.81	13.15	16.24	17.97	20.31	20.11
1996	Mean	44.43	51.79	58.60	66.78	81.48	86.36	88.09	84.31	83.25
	StdDev	12.02	12.45	13.49	12.25	17.56	19.53	16.02	17.03	16.46
1997	Mean	41.50	52.29	73.30	72.88	79.14	83.51	87.66	87.71	87.16
	StdDev	9.19	11.10	10.00	12.99	13.48	13.61	13.61	12.23	15.10
1998	Mean	39.28	47.88	60.56	70.51	79.73	81.81	84.88	98.30	91.93
	StdDev	11.93	12.68	11.81	14.20	11.85	15.03	13.15	15.23	15.21
1999	Mean	52.53	62.91	75.34	93.44	101.45	95.64	89.42	91.13	88.49
	StdDev	11.43	10.90	14.86	20.11	18.39	22.37	21.01	24.39	23.93
2000	Mean	41.66	47.55	53.04	62.40	71.50	73.03	79.30	71.55	70.71
	StdDev	9.93	10.77	11.76	13.27	14.35	15.40	17.53	8.06	4.92
2001	Mean	44.29	54.78	67.15	75.74	85.94	93.95	92.62	92.62	104.57
	StdDev	10.00	13.21	12.80	12.65	13.10	15.92	16.49	17.59	10.80
2002	Mean	43.74	54.62	66.58	76.66	88.13	93.25	112.83	100.98	104.25
	StdDev	12.56	15.14	17.68	19.61	17.46	18.38	22.27	21.38	21.12
2003	Mean	39.78	48.20	56.30	63.21	67.28	72.11	72.49	74.48	71.67
	StdDev	10.79	12.24	12.26	11.12	11.21	12.73	13.99	14.94	14.08
2004	Mean	52.23	68.84	75.31	82.17	90.13	85.06	86.85	86.73	86.91
	StdDev	13.47	15.97	18.56	15.36	17.83	16.61	18.42	17.24	16.78
2005	Mean	40.89	51.78	61.75	71.38	82.00	85.25	92.11	82.35	85.71
	StdDev	9.54	9.95	10.09	10.11	14.82	12.87	18.80	15.24	18.34
2006	Mean	42.16	50.34	60.49	71.43	78.57	77.89	82.72	83.29	93.11
	StdDev	9.62	11.20	11.68	10.07	13.56	12.42	15.14	17.69	15.05

TABLE 12 HUDSON RIVER STRIPED BASS AGE FREQUENCIES 1985 - 2006

AGE	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
0	984	1940	18649	15488	13397	12591	3275	5874	12587	9624	7457	4346	11452	6674	9981	4830	16103	4656	16116	3613	7727	2233
1	179	41	25	149	145	57	154	156	104	56	240	93	88	128	118	150	168	174	63	102	21	57
2	10	3	2	6	11	9	11	7	23	5	23	4	10	15	4	11	7	12	7	4	1	2
3	0	4	0	1	0	2	3	2	6	0	4	3	2	1	0	1	0	2	1	0	0	1
4	0	3	0	1	0	0	1	4	1	3	3	0	0	1	0	0	1	0	0	0	0	0
5	1	0	2	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
6	0	0	0	1	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	1	0	0	0	0	2	2	0	0	1	0	0	0	0	0	0	0
9	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1174	1991	18678	15646	13555	12661	3444	6044	12721	9689	7730	4449	11552	6819	10106	4992	16279	4844	16187	3719	7749	2293

Tagged with USFWS Internal Anchor Tags

AGE	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
0				0	0	0	0	0	1	0	4	0	0	0	13	0	0	0	0	0	0	0
1				50	41	27	80	83	43	13	68	40	29	46	57	33	63	97	28	20	4	8
2				4	11	8	10	6	21	4	18	3	9	14	3	6	6	12	7	4	0	2
3				1	0	2	2	2	5	0	3	2	1	1	0	1	0	2	1	0	0	1
4				1	0	0	1	4	1	3	2	0	0	1	0	0	1	0	0	0	0	0
5				0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
6				1	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0
7				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8				0	0	1	0	0	0	0	2	1	0	0	1	0	0	0	0	0	0	0
9				0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10				0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0
UNK				0	0	6	0	0	0	0	0	3	0	0	1	0	0	0	0	0	0	0
Tagged	0	0	0	57	54	45	93	95	71	21	98	49	39	62	77	40	70	111	36	24	4	11

TABLE 13

2006 HUDSON RIVER OLDER STRIPED BASS
LENGTH FREQUENCY

TL	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/F Weeks 4 - 9	C/F Weeks 1 - 9
<110	4	3	3	2	0	0	0	0	0	2	12
110-114	3	2	2	3	0	0	0	0	0	3	10
115-119	4	0	1	0	0	0	0	0	0	0	5
120-124	2	0	1	1	0	0	0	0	0	1	4
125-129	0	0	1	1	2	0	0	0	0	3	4
130-134	0	0	1	1	0	1	1	0	0	3	4
135-139	0	0	0	0	0	0	0	0	0	0	0
140-144	0	0	0	0	1	0	0	0	0	1	1
145-149	0	1	0	1	0	0	0	0	0	1	2
150-154	0	0	0	0	1	1	0	0	0	2	2
155-159	0	0	0	1	0	0	0	0	0	1	1
160-164	0	0	0	0	0	0	0	0	1	1	1
165-169	0	0	0	0	0	0	0	0	0	0	0
170-174	0	0	0	2	0	1	0	0	0	3	3
175-179	0	0	0	0	1	0	0	0	0	1	1
180-184	0	0	1	0	0	0	0	0	0	0	1
185-189	0	0	0	1	0	0	0	0	0	1	1
190-194	0	0	0	0	1	1	0	0	0	2	2
195-199	0	0	0	0	0	0	0	0	0	0	0
200-204	0	0	0	0	0	0	0	0	0	0	0
205-209	0	0	0	0	0	0	0	1	0	1	1
210-214	0	0	0	0	0	0	0	0	0	0	0
215-219	0	0	0	0	0	1	0	0	0	1	1
220-224	0	0	0	0	0	0	0	0	0	0	0
225-229	0	0	0	0	1	0	0	0	0	1	1
230-234	0	0	0	0	1	0	0	0	0	1	1
235-239	0	0	0	0	0	0	0	0	0	0	0
240-244	0	0	0	0	0	0	0	0	0	0	0
245-249	0	0	0	0	0	1	0	0	0	1	1
>249	0	0	0	0	1	0	0	0	0	1	1
Total	13	6	10	13	9	6	1	1	1	31	60

TABLE 14 2006 HUDSON RIVER OLDER STRIPED BASS CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E Weeks 4 - 9	C/E Weeks 1 - 9
East												
18E	23	0	0	0	0	1	0	0	0	0	0.2	0.1
21E	23	0	0	0	0	0	1	0	0	0	0.2	0.1
17E	24	0	0	0	2	1	2	0	0	0	0.8	0.6
16E	25	0	0	0	1	0	0	0	0	1	0.3	0.2
12E	29	3	0	0	0	0	0	0	0	0	0.0	0.3
14E	29	0	1	3	0	2	0	0	0	0	0.3	0.7
19E	33	0	0	0	0	0	0	0	0	0	0.0	0.0
11E	34	0	0	1	0	0	0	0	0	0	0.0	0.1
9E	34	5	0	1	1	0	0	0		0	0.2	0.9
7EE	35	0	0	2	0	0	0	0	0	0	0.0	0.2
7EW	35	1	1	3	1	0	0	0	0	0	0.2	0.7
8E	35			2	0	0	3	1	0	0	0.7	0.9
3E	39											
4E	39	0	0	0	0	0	0	0	0	0	0.0	0.0
West												
15WS	27	0	0	0	0	0	0	0	0	0	0.0	0.0
16WN	27	0	0	0	0	0	0	0	1	0	0.2	0.1
14W	29	2	0	0	1	0	0	0	0	0	0.2	0.3
12W	30	0	0	0	0	0	0	0	0	0	0.0	0.0
11W	32	0	0	0	0	2	0	0	0	0	0.3	0.2
10W	35	0	0	0	0	0	0	0	0	0	0.0	0.0
9W	35	2	3	0	1	2	0	0	0	0	0.5	0.9
8W	36	0	0	0	2	0	0	0	0	0	0.3	0.2
7W	37	0	0	0	0	0	0	0	0	0	0.0	0.0
3W	39	0	0	1	1	0	0	0	0	0	0.2	0.2
4W	39	0	0	0	0	0	0	0	0	0	0.0	0.0
5W	39	0	1	0	0	1	0	0	0	0	0.2	0.2
Effort		24	24	25	25	25	25	25	24	24	148	221
Catch		13	6	13	10	9	6	1	1	1	28	60
C/E		0.54	0.25	0.52	0.40	0.36	0.24	0.04	0.04	0.04	0.19	0.27

TABLE 15 2006 HUDSON RIVER YOY WHITE PERCH CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E
East											
18E	23	0	0	0	0	0	0	0	0	0	0.0
21E	23	0	0	0	0	0	1	0	0	0	0.1
17E	24	0	0	0	0	0	0	0	0	0	0.0
16E	25	0	0	0	0	0	0	0	0	0	0.0
12E	29	0	0	0	0	0	0	0	0	0	0.0
14E	29	0	0	0	0	0	0	0	0	1	0.1
19E	33	0	0	0	0	0	1	0	0	0	0.1
11E	34	0	0	0	0	0	0	0	0	0	0.0
9E	34	0	0	0	1	0	6	0		0	0.9
7EE	35	28	0	1	0	0	0	0	0	0	3.2
7EW	35	0	5	17	4	9	24	9	0	0	7.6
8E	35			13	0	0	0	0	0	0	1.9
3E	39										
4E	39	0	2	0	0	7	0	6	3	0	2.0
West											
15WS	27	0	1	0	6	0	0	0	0	0	0.8
16WN	27	0	0	0	2	1	0	0	0	0	0.3
14W	29	0	4	5	50	4	15	0	1	0	8.8
12W	30	0	25	136	70	39	15	6	7	0	33.1
11W	32	0	0	20	0	0	0	0	0	0	2.2
10W	35	0	0	16	0	28	9	0	0	0	5.9
9W	35	0	0	1	0	0	0	1	0	0	0.2
8W	36	0	6	4	26	14	0	1	2	0	5.9
7W	37	0	0	74	2	42	0	1	0	0	13.2
3W	39	0	0	1	0	0	0	0	0	1	0.2
4W	39	0	0	0	1	0	0	0	0	0	0.1
5W	39	0	0	3	0	14	0	0	0	1	2.0
Effort		24	24	25	25	25	25	25	24	24	221
Catch		28	43	291	162	158	71	24	13	3	793
C/E		1.17	1.79	11.64	6.48	6.32	2.84	0.96	0.54	0.13	3.59

TABLE 16 2006 HUDSON RIVER OLDER WHITE PERCH CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E
East											
18E	23	1	3	0	0	4	1	0	0	0	1.0
21E	23	2	3	0	1	0	0	0	0	0	0.7
17E	24	0	0	5	0	1	0	1	1	1	1.0
16E	25	0	0	1	0	0	0	3	0	0	0.4
12E	29	10	8		1	0	1	0	0	0	2.5
14E	29	8	15	9	9	0	0	0	0		5.1
19E	33	5	0	0	0	0	0	1	0	2	0.9
11E	34	0	3	0	0	0	0	0	0	0	0.3
9E	34	60	28	0	0	0	0	0		3	11.4
7EE	35	0	51	190	0	1	0	0	0	0	26.9
7EW	35	4	0	0	0	0	0	0	0	0	0.4
8E	35			19	0	0	659	0	0	0	96.9
3E	39										
4E	39	37	0	33	0	15	0	4	0	0	9.9
West											
15WS	27	0	6	0	2	10	1	0	0	2	2.3
16WN	27	54	19	44	62	6	6	6	0	0	21.9
14W	29	8	13	18	76	0	35	2	0	0	16.9
12W	30	32	19	35	5	6	60	9	2	0	18.7
11W	32	13	5	0	1	3	0	0	0	0	2.4
10W	35	17	0	14	14	11	2	1	0	0	6.6
9W	35	3	8	3	0	2	0	0	0	0	1.8
8W	36	12	0	0	7	3	0	0	0	1	2.6
7W	37	8	1	10	5	41	1	1	1	0	7.6
3W	39	7	2	4	2	0	0	8	1	0	2.7
4W	39	32	3	6	3	0	0	10	0	0	6.0
5W	39	0	23	6	2	52	0	1	1	5	10.0
Effort		24	24	25	25	25	25	25	24	24	221
Catch		313	210	397	190	155	766	47	6	14	2098
C/E		13.04	8.75	16.54	7.60	6.20	30.64	1.88	0.25	0.58	9.49

TABLE 17

2006 HUDSON RIVER WHITE PERCH
LENGTH FREQUENCY

TL (mm)	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/F Weeks 4 - 9	C/F Weeks 1 - 9
< 20	0	0	0	0	0	0	1	0	0	1	1
21-25	0	2	0	0	0	1	0	0	0	1	3
25-29	0	5	2	0	0	0	0	0	0	0	7
30-34	0	7	7	1	1	0	0	0	0	2	16
35-39	0	7	17	6	3	2	0	0	0	11	35
40-44	0	8	20	9	9	5	0	0	0	23	51
45-49	0	0	18	15	13	2	0	0	0	30	48
50-54	0	1	19	15	18	10	0	0	0	43	63
55-59	0	0	9	17	14	7	2	1	0	41	50
60-64	0	0	1	15	20	16	7	2	0	60	61
65-69	0	0	2	8	14	7	3	3	0	35	37
70-74	0	0	3	0	10	13	3	0	0	26	29
75-79	0	0	1	0	4	6	4	6	0	20	21
80-84	0	0	0	0	0	2	3	1	0	6	6
85-89	0	1	0	0	0	0	1	0	0	1	2
90-94	0	1	0	1	1	0	0	0	0	2	3
95-99	4	13	4	2	1	0	0	0	0	3	24
100-104	9	12	21	6	5	1	1	0	0	13	55
105-109	19	35	35	10	7	0	0	0	0	17	106
110-114	14	25	39	13	15	8	2	0	0	38	116
115-119	5	24	40	12	9	14	3	0	0	38	107
120-124	0	6	13	8	15	22	1	0	0	46	65
125-129	0	2	2	12	7	20	2	2	0	43	47
130-134	0	6	5	6	4	22	3	0	0	35	46
135-139	0	3	3	4	7	14	4	0	1	30	36
140-144	0	2	3	4	8	5	1	0	0	18	23
145-149	0	8	7	5	3	6	2	0	0	16	31
150-154	2	8	7	2	4	7	6	0	0	19	36
155-159	2	1	8	7	9	5	5	1	0	27	38
160-164	0	4	9	3	8	3	0	0	0	14	27
165-169	2	3	4	6	7	9	2	0	0	24	33
170-174	2	4	7	5	5	5	2	1	0	18	31
175-179	0	6	11	5	3	8	5	0	0	21	38
180-184	0	5	9	7	5	8	0	0	0	20	34
185-189	1	1	2	5	4	6	2	1	0	18	22
190-194	0	2	4	6	3	5	1	0	0	15	21
195-199	0	2	2	6	2	2	1	0	0	11	15
200-204	0	0	1	3	3	3	1	0	0	10	11
205-209	0	0	5	1	2	6	1	0	0	10	15
210-214	0	0	2	2	3	2	1	0	0	8	10
215-219	0	0	0	3	1	2	1	0	0	7	7
220-224	0	1	2	1	0	1	0	0	0	2	5
225-229	0	0	0	0	0	0	0	0	0	0	0
230-234	0	1	0	0	0	0	0	0	0	0	1
235-239	0	0	0	0	0	0	0	0	0	0	0
240-244	0	1	0	0	0	0	0	0	0	0	1
Measured	60	207	344	231	247	255	71	18	1	823	1434
Mean	118.02	115.15	109.16	112.68	108.57	126.37	126.63	95.11	127.65	116.17	115.48
StDev	21.46	42.76	48.02	53.27	50.02	48.34	48.54	41.17	26.02	50.36	47.99

TABLE 18

2006 HUDSON RIVER ATLANTIC TOMCOD LENGTH FREQUENCY AND CATCH BY STATION

A

TL (mm)	Week 1 Jul 11	Week 2 Jul 25	Week 3 Aug 8	Week 4 Aug 22	Week 5 Sep 7	Week 6 Sep 19	Week 7 Oct 19	Week 8 Oct 27	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
5-10						0				0	0
10-15						0				0	0
15-20						0				0	0
20-25						0				0	0
25-30						0				0	0
30-35						0				0	0
35-40						0				0	0
40-45						0				0	0
45-50						0				0	0
50-55						0				0	0
55-60						0				0	0
60-65						0				0	0
65-70						0				0	0
70-75						0				0	0
75-80						0				0	0
80-85						0				0	0
85-90						0				0	0
90-95						0				0	0
95-100						0				0	0
100-105						0				0	0
105-110						0				0	0
110-115						1				1	1
115-120						0				0	0
120-125						0				0	0
125-130						0				0	0
130-135						1				1	1
135-140						0				0	0
140-145						0				0	0
>145						0				0	0
Measured	0	0	0	0	0	2	0	0	0	2	2
Mean	0.0	0.0	0.0	0.0	0.0	122.5	0.0	0.0	0.0	0.0	0.0
StdDev	0.0	0.0	0.0	0.0	0.0	13.4	0.0	0.0	0.0	0.0	0.0

B

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E
East											
18E	23	0	0	0	0	0	0	0	0	0	0.0
21E	23	0	0	0	0	0	0	0	0	0	0.0
17E	24	0	0	0	0	0	0	0	0	0	0.0
16E	25	0	0	0	0	0	0	0	0	0	0.0
12E	29	0	0	0	0	0	0	0	0	0	0.0
14E	29	0	0	0	0	0	0	0	0		0.0
19E	33	0	0	0	0	0	0	0	0	0	0.0
11E	34	0	0	0	0	0	0	0	0	0	0.0
9E	34	0	0	0	0	0	0	0		0	0.0
7EE	35	0	0	0	0	0	0	0	0	0	0.0
7EW	35	0	0	0	0	0	0	0	0	0	0.0
8E	35			0	0	0	0	0	0	0	0.0
3E	39										
4E	39	0	0	0	0	0	0	0	0	0	0.0
West											
15WS	27	0	0	0	0	0	0	0	0	0	0.0
16WN	27	0	0	0	0	0	0	0	0	0	0.0
14W	29	0	0	0	0	0	1	0	0	0	0.1
12W	30	0	0	0	0	0	1	0	0	0	0.1
11W	32	0	0	0	0	0	0	0	0	0	0.0
10W	35	0	0	0	0	0	0	0	0	0	0.0
9W	35	0	0	0	0	0	0	0	0	0	0.0
8W	36	0	0	0	0	0	0	0	0	0	0.0
7W	37	0	0	0	0	0	0	0	0	0	0.0
3W	39	0	0	0	0	0	0	0	0	0	0.0
4W	39	0	0	0	0	0	0	0	0	0	0.0
5W	39	0	0	0	0	0	0	0	0	0	0.0
Effort		24	24	25	25	25	25	25	24	24	221
Catch		0	0	0	0	0	2	0	0	0	2
C/E		0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.00	0.01

TABLE 19 2006 HUDSON RIVER AMERICAN EEL CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E
East											
18E	23	0	0	0	0	0	0	0	0	0	0.0
21E	23	0	0	0	0	0	0	0	0	0	0.0
17E	24	0	0	0	0	0	0	0	0	0	0.0
16E	25	1	0	0	0	0	0	0	0	0	0.1
12E	29	0	0	0	0	0	0	0	0	0	0.0
14E	29	0	0	0	0	0	0	0	0		0.0
19E	33	0	0	0	0	0	0	0	0	0	0.0
11E	34	0	0	0	0	0	0	0	0	0	0.0
9E	34	0	0	0	0	0	0	0		0	0.0
7EE	35	0	0	0	0	0	0	0	0	0	0.0
7EW	35	0	0	0	0	0	0	0	0	0	0.0
8E	35			0	0	0	0	1	2	0	0.4
3E	39										
4E	39	0	0	0	0	1	0	0	0	0	0.1
West											
15WS	27	0	0	0	0	0	0	0	0	0	0.0
16WN	27	0	0	0	0	0	0	0	0	0	0.0
14W	29	0	1	0	0	0	1	0	0	0	0.2
12W	30	3	3	1	0	0	2	0	0	0	1.0
11W	32	2	0	0	0	0	0	0	0	0	0.2
10W	35	0	1	0	0	1	0	0	0	0	0.2
9W	35	0	0	0	0	0	0	0	0	0	0.0
8W	36	0	0	0	0	0	0	2	0	0	0.2
7W	37	0	0	2	0	0	0	0	0	0	0.2
3W	39	0	0	0	0	0	0	0	0	0	0.0
4W	39	0	0	0	0	0	0	0	0	0	0.0
5W	39	0	0	0	0	0	0	0	0	0	0.0
Effort		24	24	25	25	25	25	25	24	24	221
Catch		6	5	3	0	2	3	3	2	0	24
C/E		0.25	0.21	0.12	0.00	0.08	0.12	0.12	0.08	0.00	0.11

TABLE 20 2006 HUDSON RIVER AMERICAN EEL LENGTH FREQUENCY

TL (mm)	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/F Weeks 4 - 9	C/F Weeks 1 - 9
< 60	0	0	0	0	0	0	0	0	0	0	0
60 - 79	0	0	0	0	0	0	0	0	0	0	0
80 - 99	0	0	0	0	0	0	0	1	0	1	1
100 - 119	0	2	0	0	1	0	2	1	0	4	6
120 - 139	1	1	1	0	0	1	0	0	0	1	4
140 - 159	1	1	0	0	0	0	0	0	0	0	2
160 - 179	0	0	0	0	0	1	0	0	0	1	1
180 - 199	1	0	0	0	0	0	0	0	0	0	1
200 - 219	2	0	1	0	0	0	0	0	0	0	3
220 - 239	0	0	0	0	0	0	0	0	0	0	0
240 - 259	0	0	0	0	1	0	0	0	0	1	1
260 - 279	0	0	0	0	0	0	0	0	0	0	0
280 - 299	0	0	0	0	0	0	0	0	0	0	0
300 - 319	0	0	0	0	0	0	0	0	0	0	0
320 - 339	1	0	1	0	0	0	0	0	0	0	2
340 - 359	0	0	0	0	0	1	0	0	0	1	1
360 - 379	0	0	0	0	0	0	0	0	0	0	0
380 - 399	0	0	0	0	0	0	0	0	0	0	0
400 - 419	0	0	0	0	0	0	0	0	0	0	0
420 - 439	0	0	0	0	0	0	0	0	0	0	0
440 - 459	0	0	0	0	0	0	0	0	0	0	0
460 - 479	0	0	0	0	0	0	0	0	0	0	0
480 - 499	0	0	0	0	0	0	0	0	0	0	0
500 - 519	0	0	0	0	0	0	0	0	0	0	0
520 - 539	0	0	0	0	0	0	0	0	0	0	0
540 - 559	0	0	0	0	0	0	0	0	0	0	0
560 - 579	0	0	0	0	0	0	0	0	0	0	0
580 - 599	0	0	0	0	0	0	0	0	0	0	0
600 - 619	0	1	0	0	0	0	0	0	0	0	1
620 - 639	0	0	0	0	0	0	0	0	0	0	0
640 - 659	0	0	0	0	0	0	0	0	0	0	0
660 - 679	0	0	0	0	0	0	1	0	0	1	1
680 - 699	0	0	0	0	0	0	0	0	0	0	0
> 699	0	0	0	0	0	0	0	0	0	0	0
Measured	6	5	3	0	2	3	3	2	0	10	24
Mean	198.3	217.4	222.0	0	177.0	215.0	294.7	101.5	0.0	208.6	209.5
StDev	69.1	214.4	101.6	0	93.3	320.7	320.7	13.4	0.0	179.8	150.5

TABLE 21 2006 HUDSON RIVER YOY BLUEFISH CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E
East											
18E	23	0	0	1	0	0	2	0	0	0	0.3
21E	23	0	0	2	0	4	0	0	1	0	0.8
17E	24	3	0	6		3	0	0	0	0	1.5
16E	25	1	1	0	0	0	0	0	0	0	0.2
12E	29	1	0	0	0	0	6	0		0	0.9
14E	29	0	0	0	0	0	0	0	0		0.0
19E	33	2	0	0	0	0	2	0	0	0	0.4
11E	34	0	0	2	0	0	1	0	0	0	0.3
9E	34	0	0	0	0	0	0	0		0	0.0
7EE	35	0	0	1	1	0	0	0	0	0	0.2
7EW	35	0	0	0	0	0	0	0	0	0	0.0
8E	35			3	7	4	0	0	0	0	2.0
3E	39										
4E	39	0	0	0	0	5	0	0	0	0	0.6
West											
15WS	27	0	0	0	0	3	0	0	0	0	0.3
16WN	27	1	1	0	0	1	0	0	0	0	0.3
14W	29	0	0	0	0	3	0	0	0	0	0.3
12W	30	2	0	0	0	0	4	0	0	0	0.7
11W	32	0	2	0	0	4	0	0	0	0	0.7
10W	35	0	0	1	0	1	0	1	0	0	0.3
9W	35	0	0	1	0	1	0	0	0	0	0.2
8W	36	0	0	0	0	0	0	0	0	0	0.0
7W	37	0	0	0	1	3	0	0	0	0	0.4
3W	39	1	0	1	3	1	0	0	0	0	0.7
4W	39	0	0	1	3	0	0	0	0	0	0.4
5W	39	0	0	0	0	3	0	0	0	0	0.3
Effort		24	24	25	25	25	25	25	24	24	221
Catch		11	4	19	15	36	15	1	1	0	102
C/E		0.46	0.17	0.76	0.63	1.44	0.60	0.04	0.04	0.00	0.46

TABLE 22 2006 HUDSON RIVER BLUEFISH LENGTH FREQUENCY

TL (mm)	Week 1 Jul 11	Week 2 Jul 25	Week 3 Aug 8	Week 4 Aug 22	Week 5 Sep 7	Week 6 Sep 19	Week 7 Oct 19	Week 8 Oct 27	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
< 65	0	0	2	0	0	0	0	0	0	0	2
65 - 69	0	0	0	0	0	0	0	0	0	0	0
70 - 74	0	0	0	0	0	1	0	0	0	1	1
75 - 79	0	0	0	0	0	0	0	0	0	0	0
80 - 84	1	0	1	0	2	0	0	0	0	2	4
85 - 89	2	0	0	0	3	0	0	0	0	3	5
90 - 94	0	0	0	0	4	0	0	0	0	4	4
95 - 99	1	0	0	0	5	0	0	0	0	5	6
100 - 104	2	0	0	0	3	0	0	0	0	3	5
105 - 109	1	2	0	0	1	1	0	0	0	2	5
110 - 114	2	0	0	0	1	2	0	0	0	3	5
115 - 119	0	0	0	0	0	1	0	0	0	1	1
120 - 124	1	0	0	1	0	0	1	0	0	2	3
125 - 129	1	1	0	0	0	0	0	0	0	0	2
130 - 134	0	1	1	2	0	0	0	0	0	2	4
135 - 139	0	0	3	1	0	1	0	0	0	2	5
140 - 144	0	0	4	1	1	1	0	0	0	3	7
145 - 149	0	0	1	1	0	0	0	0	0	1	2
150 - 154	0	0	1	0	1	0	0	1	0	2	3
155 - 159	0	0	3	0	0	0	0	0	0	0	3
160 - 164	0	0	2	1	1	1	0	0	0	3	5
165 - 169	0	0	0	1	0	1	0	0	0	2	2
170 - 174	0	0	1	2	0	0	0	0	0	2	3
175 - 179	0	0	0	1	1	0	0	0	0	2	2
180 - 184	0	0	0	2	1	2	0	0	0	5	5
185 - 189	0	0	0	1	0	1	0	0	0	2	2
190 - 194	0	0	0	0	1	1	0	0	0	2	2
195 - 199	0	0	0	1	0	0	0	0	0	1	1
200 - 204	0	0	0	0	1	0	0	0	0	1	1
205 - 209	0	0	0	0	1	0	0	0	0	1	1
210 - 214	0	0	0	0	2	0	0	0	0	2	2
215 - 219	0	0	0	0	1	0	0	0	0	1	1
220 - 224	0	0	0	0	1	0	0	0	0	1	1
225 - 229	0	0	0	0	3	0	0	0	0	3	3
230 - 234	0	0	0	0	1	0	0	0	0	1	1
235 - 239	0	0	0	0	0	0	0	0	0	0	0
240 - 244	0	0	0	0	0	0	0	0	0	0	0
245 - 249	0	0	0	0	0	0	0	0	0	0	0
250 - 254	0	0	0	0	0	1	0	0	0	1	1
255 - 259	0	0	0	0	0	0	0	0	0	0	0
260 - 264	0	0	0	0	0	0	0	0	0	0	0
265 - 269	0	0	0	0	0	0	0	0	0	0	0
>269	0	0	0	0	1	1	0	0	0	0	2
Measured	11	4	19	15	36	15	1	1	0	66	102
Mean	103.6	118.0	135.2	161.3	145.9	159.4	122.0	150.0		152.0	142.3
StDev	13.9	14.3	34.0	23.7	59.7	54.0				51.5	47.4

TABLE 23 2006 HUDSON RIVER WINTER FLOUNDER CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E
East											
18E	23	0	0	0	0	0	0	2	0	0	0.2
21E	23	0	0	0	1	0	0	0	0	0	0.1
17E	24	0	0	0	0	1	1	0	0	0	0.2
16E	25	0	0	0	0	1	0	0	0	0	0.1
12E	29	0	0	0	1	0	0	0	0	0	0.1
14E	29	0	0	0	0	0	0	0	0		0.0
19E	33	0	0	0	0	0	0	0	0	0	0.0
11E	34	0	0	0	0	0	0	0	0	0	0.0
9E	34	0	0	0	0	0	0	0		0	0.0
7EE	35	0	0	0	0	0	0	0	0	0	0.0
7EW	35	0	0	0	0	0	0	0	0	0	0.0
8E	35			0	0	0	0	0	0	0	0.0
3E	39										
4E	39	0	0	0	0	0	0	0	0	0	0.0
West											
15WS	27	0	0	0	0	0	0	0	0	0	0.0
16WN	27	0	0	0	0	0	0	0	0	0	0.0
14W	29	0	0	0	0	0	0	0	0	0	0.0
12W	30	0	0	0	0	0	0	0	0	0	0.0
11W	32	0	0	0	0	1	0	0	0	0	0.1
10W	35	0	0	0	0	0	0	0	0	0	0.0
9W	35	0	0	0	0	0	0	0	0	0	0.0
8W	36	0	0	0	0	0	0	0	0	0	0.0
7W	37	0	0	0	0	0	0	0	0	0	0.0
3W	39	0	0	0	0	0	0	0	0	0	0.0
4W	39	0	0	0	0	0	0	0	0	0	0.0
5W	39	0	0	0	0	0	0	0	0	0	0.0
Effort		24	24	25	25	25	25	25	24	24	221
Catch		0	0	0	2	3	1	2	0	0	8
C/E		0.00	0.00	0.00	0.08	0.12	0.04	0.08	0.00	0.00	0.04

TABLE 24 2006 HUDSON RIVER WINTER FLOUNDER LENGTH FREQUENCY

TL (mm)	Week 1 Jul 11	Week 2 Jul 25	Week 3 Aug 8	Week 4 Aug 22	Week 5 Sep 7	Week 6 Sep 19	Week 7 Oct 19	Week 8 Oct 27	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
< 25	0	0	0	0	0	0	0	0	0	0	0
25 - 29	0	0	0	0	0	0	0	0	0	0	0
30 - 34	0	0	0	0	0	0	0	0	0	0	0
35 - 39	0	0	0	0	0	0	0	0	0	0	0
40 - 44	0	0	0	0	0	0	0	0	0	0	0
45 - 49	0	0	0	0	0	0	0	0	0	0	0
50 - 54	0	0	0	0	0	0	0	0	0	0	0
55 - 59	0	0	0	0	0	0	0	0	0	0	0
60 - 64	0	0	0	1	0	0	0	0	0	1	1
65 - 69	0	0	0	1	1	0	0	0	0	2	2
70 - 74	0	0	0	0	1	1	0	0	0	2	2
75 - 79	0	0	0	0	1	0	0	0	0	1	1
80 - 84	0	0	0	0	0	0	0	0	0	0	0
85 - 89	0	0	0	0	0	0	0	0	0	0	0
90 - 94	0	0	0	0	0	0	0	0	0	0	0
95 - 99	0	0	0	0	0	0	0	0	0	0	0
100 - 104	0	0	0	0	0	0	1	0	0	1	1
105 - 109	0	0	0	0	0	0	1	0	0	1	1
110 - 114	0	0	0	0	0	0	0	0	0	0	0
115 - 119	0	0	0	0	0	0	0	0	0	0	0
120 - 124	0	0	0	0	0	0	0	0	0	0	0
125 - 129	0	0	0	0	0	0	0	0	0	0	0
130 - 134	0	0	0	0	0	0	0	0	0	0	0
135 - 139	0	0	0	0	0	0	0	0	0	0	0
140 - 144	0	0	0	0	0	0	0	0	0	0	0
145 - 149	0	0	0	0	0	0	0	0	0	0	0
150 - 154	0	0	0	0	0	0	0	0	0	0	0
155 - 159	0	0	0	0	0	0	0	0	0	0	0
160 - 164	0	0	0	0	0	0	0	0	0	0	0
165 - 169	0	0	0	0	0	0	0	0	0	0	0
170 - 174	0	0	0	0	0	0	0	0	0	0	0
175 - 179	0	0	0	0	0	0	0	0	0	0	0
180 - 184	0	0	0	0	0	0	0	0	0	0	0
185 - 189	0	0	0	0	0	0	0	0	0	0	0
190 - 194	0	0	0	0	0	0	0	0	0	0	0
195 - 199	0	0	0	0	0	0	0	0	0	0	0
> 199	0	0	0	0	0	0	0	0	0	0	0
Measured	0	0	0	2	3	1	2	0	0	8	8
Mean	58.67	0.0	0.0					0.0	0.0	77.5	77.5
StDev	32.87	0.0	0.0					0.0	0.0	17.2	17.2

TABLE 25 2006 HUDSON RIVER AMERICAN SHAD CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E
East											
18E	23	0	0	0	0	0	0	0	0	0	0.0
21E	23	0	0	0	0	0	0	0	0	0	0.0
17E	24	0	0	0	0	0	0	0	0	0	0.0
16E	25	0	0	0	0	0	0	0	0	0	0.0
12E	29	0	0	0	0	0	0	0	0	0	0.0
14E	29	0	0	0	0	0	0	0	0		0.0
19E	33	0	0	0	0	0	0	0	0	0	0.0
11E	34	0	0	0	0	0	0	0	0	0	0.0
9E	34	0	6	0	0	0	0	0		0	0.8
7EE	35	0	0	0	0	0	0	0	0	0	0.0
7EW	35	0	0	0	0	0	0	0	0	0	0.0
8E	35			0	0	0	0	0	0	0	0.0
3E	39										
4E	39	0	0	0	0	0	0	0	0	1	0.1
West											
15WS	27	0	0	0	0	0	0	0	0	0	0.0
16WN	27	0	0	0	0	0	0	0	0	0	0.0
14W	29	0	0	0	0	0	0	0	0	0	0.0
12W	30	0	0	0	0	0	0	0	0	0	0.0
11W	32	0	0	0	0	0	0	0	0	0	0.0
10W	35	0	0	0	0	0	0	0	0	0	0.0
9W	35	0	0	0	0	4	0	0	0	0	0.4
8W	36	0	0	0	0	0	0	0	0	0	0.0
7W	37	0	0	0	0	0	0	0	0	0	0.0
3W	39	0	0	0	0	0	0	0	0	0	0.0
4W	39	0	0	0	0	0	0	0	0	0	0.0
5W	39	0	0	2	0	0	0	0	1	0	0.3
Effort		24	24	25	25	25	25	25	24	24	221
Catch		0	6	2	0	4	0	0	1	1	14
C/E		0.00	0.25	0.08	0.00	0.16	0.00	0.00	0.04	0.04	0.06

TABLE 26 2006 HUDSON RIVER AMERICAN SHAD LENGTH FREQUENCY

TL (mm)	Week 1 Jul 11	Week 2 Jul 25	Week 3 Aug 8	Week 4 Aug 22	Week 5 Sep 7	Week 6 Sep 19	Week 7 Oct 19	Week 8 Oct 27	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
< 25	0	0	0	0	0	0	0	0	0	0	0
25 - 29	0	0	0	0	0	0	0	0	0	0	0
30 - 34	0	0	0	0	0	0	0	0	0	0	0
35 - 39	0	0	0	0	0	0	0	0	0	0	0
40 - 44	0	0	0	0	0	0	0	0	0	0	0
45 - 49	0	0	0	0	0	0	0	0	0	0	0
50 - 54	0	0	0	0	0	0	0	0	0	0	0
55 - 59	0	0	0	0	0	0	0	0	0	0	0
60 - 64	0	0	0	0	0	0	0	0	0	0	0
65 - 69	0	0	0	0	0	0	0	0	0	0	0
70 - 74	0	1	0	0	0	0	0	0	0	0	1
75 - 79	0	1	0	0	0	0	0	0	0	0	1
80 - 84	0	2	1	0	0	0	0	0	0	0	3
85 - 89	0	2	1	0	0	0	0	0	0	0	3
90 - 94	0	0	0	0	0	0	0	0	0	0	0
95 - 99	0	0	0	0	0	0	0	0	0	0	0
100 - 104	0	0	0	0	3	0	0	0	0	3	3
105 - 109	0	0	0	0	1	0	0	0	0	1	1
110 - 114	0	0	0	0	0	0	0	1	0	1	1
115 - 119	0	0	0	0	0	0	0	0	0	0	0
120 - 124	0	0	0	0	0	0	0	0	0	0	0
125 - 129	0	0	0	0	0	0	0	0	1	1	1
130 - 134	0	0	0	0	0	0	0	0	0	0	0
135 - 139	0	0	0	0	0	0	0	0	0	0	0
140 - 144	0	0	0	0	0	0	0	0	0	0	0
145 - 149	0	0	0	0	0	0	0	0	0	0	0
> 149	0	0	0	0	0	0	0	0	0	0	0
Measured	0	6	2	0	4	0	0	1	1	6	14
Mean		81.2	83.5		104.0			110.0	125.0	108.5	93.2
StDev		6.0	3.5		2.4					8.6	15.3

TABLE 27 2006 HUDSON RIVER ALEWIFE CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E
East											
18E	23	0	0	0	0	0	0	0	0	0	0.0
21E	23	0	0	0	0	0	0	0	1	0	0.1
17E	24	0	0	0	0	0	0	0	7	0	0.8
16E	25	0	0	0	0	0	0	0	0	0	0.0
12E	29	0	0	0	0	0	0	0	0	1	0.1
14E	29	0	0	0	0	0	0	0	0		0.0
19E	33	0	0	0	0	0	0	0	0	0	0.0
11E	34	0	0	0	0	0	0	0	0	0	0.0
9E	34	0	0	0	0	0	0	0		0	0.0
7EE	35	0	0	0	0	0	0	0	0	0	0.0
7EW	35	0	0	0	0	0	0	0	0	0	0.0
8E	35			8	0	0	0	0	0	0	1.1
3E	39										
4E	39	0	0	0	0	0	0	0	0	0	0.0
West											
15WS	27	0	0	0	0	0	0	0	0	0	0.0
16WN	27	0	0	0	0	0	0	0	0	0	0.0
14W	29	0	0	0	0	0	0	0	0	0	0.0
12W	30	0	0	8	0	0	0	0	0	0	0.9
11W	32	0	0	0	0	0	0	0	0	0	0.0
10W	35	1	0	0	0	0	0	0	0	0	0.1
9W	35	0	0	0	0	0	0	0	2	0	0.2
8W	36	0	0	0	0	0	0	0	0	0	0.0
7W	37	0	0	0	0	0	0	0	0	0	0.0
3W	39	1	0	0	0	0	0	0	0	0	0.1
4W	39	0	0	0	0	0	0	0	0	0	0.0
5W	39	1	0	0	0	0	0	0	0	0	0.1
Effort		24	24	25	25	25	25	25	24	24	221
Catch		3	0	16	0	0	0	0	10	1	30
C/E		0.13	0.00	0.64	0.00	0.00	0.00	0.00	0.42	0.04	0.14

TABLE 28 2006 HUDSON RIVER ALEWIFE LENGTH FREQUENCY

TL (mm)	Week 1 Jul 11	Week 2 Jul 25	Week 3 Aug 8	Week 4 Aug 22	Week 5 Sep 7	Week 6 Sep 19	Week 7 Oct 19	Week 8 Oct 27	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
< 25	0	0	0	0	0	0	0	0	0	0	0
25 - 29	0	0	0	0	0	0	0	0	0	0	0
30 - 34	0	0	0	0	0	0	0	0	0	0	0
35 - 39	0	0	0	0	0	0	0	0	0	0	0
40 - 44	0	0	1	0	0	0	0	0	0	0	1
45 - 49	0	0	0	0	0	0	0	0	0	0	0
50 - 54	2	0	1	0	0	0	0	0	0	0	3
55 - 59	1	0	1	0	0	0	0	0	0	0	2
60 - 64	0	0	1	0	0	0	0	0	0	0	1
65 - 69	0	0	1	0	0	0	0	0	0	0	1
70 - 74	0	0	2	0	0	0	0	1	0	1	3
75 - 79	0	0	6	0	0	0	0	1	0	1	7
80 - 84	0	0	3	0	0	0	0	2	0	2	5
85 - 89	0	0	0	0	0	0	0	1	0	1	1
90 - 94	0	0	0	0	0	0	0	0	0	0	0
95 - 99	0	0	0	0	0	0	0	2	0	2	2
100 - 104	0	0	0	0	0	0	0	0	0	0	0
105 - 109	0	0	0	0	0	0	0	3	0	3	3
110 - 114	0	0	0	0	0	0	0	0	1	1	1
115 - 119	0	0	0	0	0	0	0	0	0	0	0
120 - 124	0	0	0	0	0	0	0	0	0	0	0
125 - 129	0	0	0	0	0	0	0	0	0	0	0
130 - 134	0	0	0	0	0	0	0	0	0	0	0
135 - 139	0	0	0	0	0	0	0	0	0	0	0
140 - 144	0	0	0	0	0	0	0	0	0	0	0
145 - 149	0	0	0	0	0	0	0	0	0	0	0
> 149	0	0	0	0	0	0	0	0	0	0	0
Measured	3	0	16	0	0	0	0	10	1	11	30
Mean	52.00	0.00	70.13	0.00	0.00	0.00	0.00	91.10	113.00	93.09	76.73
StDev	2.65		11.71					12.34		13.44	17.96

TABLE 29 2006 HUDSON RIVER BLUEBACK HERRING CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E
East											
18E	23	0	0	0	0	0	0	0	9	0	1.0
21E	23	0	0	0	0	0	0	0	10	1	1.2
17E	24	0	0	0	0	0	0	0	0	0	0.0
16E	25	0	0	0	0	0	0	0	0	0	0.0
12E	29	0	0	0	0	0	0	0	0	0	0.0
14E	29	0	0	0	0	0	0	0	1		0.1
19E	33	0	0	0	0	0	0	0	0	0	0.0
11E	34	0	0	0	0	0	0	0	2	3	0.6
9E	34	0	0	0	0	0	0	0		2	0.3
7EE	35	0	0	0	0	0	0	0	1	0	0.1
7EW	35	0	0	0	0	0	0	0	0	0	0.0
8E	35			2	0	0	0	0	0	0	0.3
3E	39										
4E	39	0	0	0	0	0	0	0	0	0	0.0
West											
15WS	27	0	1	0	0	0	0	0	0	0	0.1
16WN	27	0	2	0	0	0	0	0	0	0	0.2
14W	29	0	1	0	0	0	0	1	0	0	0.2
12W	30	0	21	0	0	0	0	0	0	0	2.3
11W	32	0	0	0	0	0	0	0	0	0	0.0
10W	35	0	0	1	0	0	0	0	0	0	0.1
9W	35	0	5	0	0	0	0	0	1	0	0.7
8W	36	0	5	13	0	0	0	0	1	0	2.1
7W	37	0	0	0	0	0	0	0	0	0	0.0
3W	39	0	0	0	0	0	0	0	0	0	0.0
4W	39	0	0	0	0	0	0	1	0	0	0.1
5W	39	0	2	0	0	0	0	0	0	0	0.2
Effort		24	24	25	25	25	25	25	24	24	221
Catch		0	37	16	0	0	0	2	25	6	86
C/E		0.00	1.54	0.64	0.00	0.00	0.00	0.08	1.04	0.25	0.39

TABLE 30 2006 HUDSON RIVER BLUEBACK HERRING LENGTH FREQUENCY

TL (mm)	Week 1 Jul 11	Week 2 Jul 25	Week 3 Aug 8	Week 4 Aug 22	Week 5 Sep 7	Week 6 Sep 19	Week 7 Oct 19	Week 8 Oct 27	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
< 25	0	0	0	0	0	0	0	0	0	0	0
25 - 29	0	0	0	0	0	0	0	0	0	0	0
30 - 34	0	13	1	0	0	0	0	0	0	0	14
35 - 39	0	14	6	0	0	0	0	0	0	0	20
40 - 44	0	8	5	0	0	0	0	0	0	0	13
45 - 49	0	2	3	0	0	0	0	0	0	0	5
50 - 54	0	0	0	0	0	0	0	0	0	0	0
55 - 59	0	0	0	0	0	0	0	0	0	0	0
60 - 64	0	0	0	0	0	0	0	1	0	1	1
65 - 69	0	0	1	0	0	0	0	0	0	0	1
70 - 74	0	0	0	0	0	0	0	5	1	6	6
75 - 79	0	0	0	0	0	0	2	5	2	9	9
80 - 84	0	0	0	0	0	0	0	11	1	12	12
85 - 89	0	0	0	0	0	0	0	3	2	5	5
90 - 94	0	0	0	0	0	0	0	0	0	0	0
95 - 99	0	0	0	0	0	0	0	0	0	0	0
100 - 104	0	0	0	0	0	0	0	0	0	0	0
105 - 109	0	0	0	0	0	0	0	0	0	0	0
110 - 114	0	0	0	0	0	0	1	0	0	1	1
115 - 119	0	0	0	0	0	0	1	0	0	1	1
120 - 124	0	0	0	0	0	0	0	0	0	0	0
125 - 129	0	0	0	0	0	0	0	0	0	0	0
130 - 134	0	0	0	0	0	0	0	0	0	0	0
135 - 139	0	0	0	0	0	0	0	0	0	0	0
140 - 144	0	0	0	0	0	0	0	0	0	0	0
145 - 149	0	0	0	0	0	0	0	0	0	0	0
> 149	0	0	0	0	0	0	0	0	0	0	0
Measured	0	37	16	0	0	0	4	25	6	35	88
Mean	0	36.68	41.63	0	0	0	94.75	78.76	80.50	80.89	55.16
StDev	0	4.07	7.26	0	0	0	21.70	6.41	5.54	10.05	22.38

TABLE 31 2006 HUDSON RIVER ATLANTIC MENHADEN CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E
East											
18E	23	0	0	1	0	0	0	0	17	0	2.0
21E	23	0	0	0	0	0	0	0	6	0	0.7
17E	24	0	0	0	0	0	0	0	0	0	0.0
16E	25	0	0	0	0	0	0	0	0	0	0.0
12E	29	0	0	0	0	0	0	0	1	0	0.1
14E	29	0	0	0	0	0	0	0	0		0.0
19E	33	0	0	0	0	190	0	0	1	0	21.2
11E	34	0	0	0	0	3	0	0	0	0	0.3
9E	34	0	0	1	0	0	0	0		0	0.1
7EE	35	2194	9	3	0	0	0	0	0	0	245.1
7EW	35	0	0	0	5	0	0	0	0	0	0.6
8E	35			19	30	1	0	3	0	0	7.6
3E	39										
4E	39	2	0	0	5	3	5	1	0	0	1.8
West											
15WS	27	0	0	54	6	1	55	0	0	0	12.9
16WN	27	105	0	2	0	25	0	0	0	0	14.7
14W	29	0	0	3	0	0	0	0	0	2	0.6
12W	30	1	12	46	1	0	4	0	0	0	7.1
11W	32	5	0	16	0	0	0	0	0	0	2.3
10W	35	7	0	6	0	0	0	0	0	0	1.4
9W	35	2	0	6	0	2	0	0	3	0	1.4
8W	36	4	0	8	26	3	0	0	2	0	4.8
7W	37	0	0	208	2	1	0	0	0	0	23.4
3W	39	0	0	39	0	0	0	0	0	0	4.3
4W	39	0	0	2	0	0	0	0	0	0	0.2
5W	39	7	0	3	1	0	0	0	0	0	1.2
Effort		24	24	25	25	25	25	25	24	24	221
Catch		2327	21	417	76	229	64	4	30	2	3170
C/E		96.96	0.88	16.68	3.04	9.16	2.56	0.16	1.25	0.08	14.34

TABLE 32 2006 HUDSON RIVER ATLANTIC MENHADEN LENGTH FREQUENCY

TL (mm)	Week 1 Jul 11	Week 2 Jul 25	Week 3 Aug 8	Week 4 Aug 22	Week 5 Sep 7	Week 6 Sep 19	Week 7 Oct 19	Week 8 Oct 27	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
< 25	0	0	0	0	0	0	0	0	0	0	0
25 - 29	1	0	0	0	0	0	0	0	0	0	1
30 - 34	19	0	1	0	0	0	0	0	0	0	20
35 - 39	2	8	9	1	0	0	0	0	0	1	20
40 - 44	0	3	10	1	1	0	0	0	0	2	15
45 - 49	0	0	21	1	0	0	0	0	0	1	22
50 - 54	0	0	34	2	0	0	0	0	0	2	36
55 - 59	1	0	33	5	2	0	0	0	0	7	41
60 - 64	1	0	17	8	2	0	0	1	0	11	29
65 - 69	0	0	17	5	4	0	0	2	0	11	28
70 - 74	1	0	5	17	3	3	1	14	1	39	45
75 - 79	3	0	7	15	6	0	1	6	0	28	38
80 - 84	7	1	5	9	6	2	0	3	1	21	34
85 - 89	16	0	1	6	7	2	0	0	0	15	32
90 - 94	15	0	0	2	2	0	0	0	0	4	19
95 - 99	7	5	0	1	2	1	0	0	0	4	16
100 - 104	11	3	0	0	3	0	1	0	0	4	18
105 - 109	0	0	0	0	1	0	0	2	0	3	3
110 - 114	1	0	0	0	0	0	0	1	0	1	2
115 - 119	0	1	2	0	0	0	1	0	0	1	4
120 - 124	0	0	3	1	0	0	0	0	0	1	4
125 - 129	0	0	0	0	0	0	0	0	0	0	0
130 - 134	0	0	0	0	0	2	0	0	0	2	2
135 - 139	0	0	0	1	0	2	0	0	0	3	3
140 - 144	0	0	0	1	6	2	0	1	0	10	10
145 - 149	2	0	0	0	10	5	0	0	0	15	17
> 149	0	0	34	0	14	20	0	0	0	34	68
Measured	87	21	199	76	69	39	4	30	2	220	527
Mean	76.43	66.62	94.72	74.24	109.83	136.95	92.50	79.57	77.50	97.60	91.79
StDev	28.90	31.17	82.65	16.30	36.22	30.46	20.21	16.16	6.36	35.51	57.89

TABLE 33 2006 HUDSON RIVER SILVERSIDE CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E
East											
18E	23	1	0	11	30	3	30	30	9	0	12.7
21E	23	2	0	18	24	23	30	9	3	1	12.2
17E	24	30	0	20	20	30	0	0	0	1	11.2
16E	25	1	0	11	30	35	9	10	4	0	11.1
12E	29	0	2	30	18	30	30	30	0	0	15.6
14E	29	0	0	0	3	21	0	0	0		3.0
19E	33	0	0	30	10	6	31	12	0	0	9.9
11E	34	0	6	0	30	26	30	25	1	0	13.1
9E	34	0	1	30	0	13	30	0		0	9.3
7EE	35	0	0	0	2	30	17	0	0	0	5.4
7EW	35	0	0	2	30	34	22	0	0	0	9.8
8E	35			22	30	2	0	30	0	0	12.0
3E	39										
4E	39	0	0	1	0	1	1	0	0	0	0.3
West											
15WS	27	0	0	30	1	30	10	4	13	0	9.8
16WN	27	0	1	30	16	14	6	0	0	0	7.4
14W	29	0	0	11	16	30	3	0	0	0	6.7
12W	30	0	1	30	27	30	30	2	4	0	13.8
11W	32	0	1	2	10	0	1	0	0	0	1.6
10W	35	0	1	0	0	3	1	1	0	0	0.7
9W	35	0	0	0	8	0	3	0	0	1	1.3
8W	36	0	0	17	0	5	0	0	4	0	2.9
7W	37	0	0	2	0	2	0	0	0	0	0.4
3W	39	0	0	0	6	28	1	1	0	0	4.0
4W	39	0	0	0	1	0	11	1	0	0	1.4
5W	39	1	0	0	30	12	0	2	0	0	5.0
Effort		24	24	25	25	25	25	25	24	24	221
Catch		35	48	310	639	750	704	453	195	41	3175
C/E		1.46	0.54	11.88	13.68	16.32	11.84	6.28	1.58	0.13	14.37

TABLE 34 2006 HUDSON RIVER ATLANTIC SILVERSIDE LENGTH FREQUENCY

TL (mm)	Week 1 Jul 11	Week 2 Jul 25	Week 3 Aug 8	Week 4 Aug 22	Week 5 Sep 7	Week 6 Sep 19	Week 7 Oct 19	Week 8 Oct 27	Week 9 Nov 9	C/F Weeks 4 - 9	C/F Weeks 1 - 9
< 25	0	0	0	0	0	0	0	0	0	0	0
25 - 29	0	0	0	1	0	0	0	0	0	1	1
30 - 34	0	2	4	5	0	1	0	0	1	7	13
35 - 39	1	0	5	4	2	0	1	0	0	7	13
40 - 44	2	4	3	14	9	1	0	1	0	25	34
45 - 49	2	1	13	13	4	0	5	2	1	25	41
50 - 54	10	1	14	8	4	0	13	0	0	25	50
55 - 59	13	0	14	14	7	1	2	4	0	28	55
60 - 64	6	1	12	24	5	0	7	2	0	38	57
65 - 69	0	2	11	22	15	2	20	4	0	63	76
70 - 74	0	0	25	8	20	11	22	3	0	64	89
75 - 79	0	0	67	34	32	18	2	1	0	87	154
80 - 84	0	1	72	78	49	37	5	2	0	171	244
85 - 89	0	0	39	71	81	43	6	1	1	203	242
90 - 94	0	0	18	36	93	51	11	3	0	194	212
95 - 99	0	0	0	9	57	75	16	5	0	162	162
100 - 104	0	0	0	1	26	51	16	5	0	99	99
105 - 109	1	1	0	0	4	4	17	4	0	29	31
110 - 114	0	0	0	0	0	1	12	1	0	14	14
115 - 119	0	0	0	0	0	0	2	0	0	2	2
120 - 124	0	0	0	0	0	0	0	0	0	0	0
125 - 129	0	0	0	0	0	0	0	0	0	0	0
130 - 134	0	0	0	0	0	0	0	0	0	0	0
135 - 139	0	0	0	0	0	0	0	0	0	0	0
140 - 144	0	0	0	0	0	0	0	0	0	0	0
145 - 149	0	0	0	0	0	0	0	0	0	0	0
> 149	0	0	0	0	0	0	0	0	0	0	0
Measured	35	13	297	342	408	296	157	38	3	1244	1589
Mean	55.60	54.92	73.88	75.18	84.75	90.64	83.08	81.92	56.33	83.16	80.58
StDev	11.01	21.64	13.94	15.89	13.39	9.93	20.51	20.45	28.43	15.86	16.49

TABLE 35 2006 HUDSON RIVER YOY BLUE CRAB CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E
East											
18E	23	0	0	0	0	0	0	4	0	1	0.6
21E	23	9	0	2	0	2	0	4	2	0	2.1
17E	24	0	0	0	5	0	2	0	0	2	1.0
16E	25	0	0	0	0	12	1	2	0	0	1.7
12E	29	0	0	0	0	2	0	0	12	0	1.6
14E	29	0	0	1	0	0	0	0	0		0.1
19E	33	0	0	0	0	0	3	0	5	0	0.9
11E	34	0	0	0	6	15	4	1	0	0	2.9
9E	34	0	0	0	0	0	1	0		0	0.1
7EE	35	0	0	0	0	1	1	2	0	0	0.4
7EW	35	0	0	0	0	6	1	1	0	0	0.9
8E	35			0	0	0	2	7	0	0	1.3
3E	39										
4E	39	0	0	0	2	0	1	7	0	0	1.1
West											
15WS	27	0	2	0	23	0	0	0	0	0	2.8
16WN	27	1	0	0	0	0	0	0	1	1	0.3
14W	29	0	0	0	0	8	6	0	6	0	2.2
12W	30	3	0	0	0	1	8	4	10	0	2.9
11W	32	0	0	6	0	50	2	0	0	0	6.4
10W	35	2	0	0	0	0	1	0	0	0	0.3
9W	35	1	0	0	0	0	0	0	0	0	0.1
8W	36	0	0	0	0	20	0	0	0	0	2.2
7W	37	0	0	0	0	2	0	0	0	0	0.2
3W	39	0	0	0	0	0	0	0	0	0	0.0
4W	39	0	0	0	0	0	0	0	0	0	0.0
5W	39	0	0	0	0	0	0	0	0	0	0.0
Effort		24	24	25	25	25	25	25	24	24	221
Catch		16	2	9	36	119	33	32	36	4	287
C/E		0.67	0.08	0.36	1.44	4.76	1.32	1.28	1.50	0.17	1.30

TABLE 36 2006 HUDSON RIVER OLDER BLUE CRAB CATCH BY STATION

Station	River Mile	Week 1 Jul 18	Week 2 Aug 1	Week 3 Aug 17	Week 4 Aug 30	Week 5 Sep 19	Week 6 Sep 27	Week 7 Oct 17	Week 8 Oct 25-26	Week 9 Nov 8	C/E
East											
18E	23	3	0	0	1	0	0	0	0	0	0.4
21E	23	0	1	0	0	1	0	0	0	0	0.2
17E	24	3	1	0	0	0	1	0	0	0	0.6
16E	25	0	1	0	0	0	0	0	0	0	0.1
12E	29	3	9	2	0	0	0	0	0	0	1.6
14E	29	2	1	0	0	0	0	0	0		0.4
19E	33	0	0	0	0	0	1	0	0	0	0.1
11E	34	3	4	0	2	0	0	0	0	0	1.0
9E	34	0	0	0	0	0	2	0		0	0.3
7EE	35	1	5	0	2	1	3	0	0	0	1.3
7EW	35	1	3	0	3	0	0	0	0	0	0.8
8E	35			0	0	0	0	3	0	0	0.4
3E	39										
4E	39	2	0	0	2	6	0	0	0	0	1.1
West											
15WS	27	0	3	0	2	0	0	0	0	0	0.6
16WN	27	0	0	0	0	0	0	0	0	0	0.0
14W	29	2	0	0	0	0	0	0	0	0	0.2
12W	30	0	2	0	0	0	0	0	0	0	0.2
11W	32	4	0	0	0	6	1	0	0	0	1.2
10W	35	0	0	0	0	0	2	0	0	0	0.2
9W	35	2	0	0	0	0	0	0	0	0	0.2
8W	36	16	0	0	0	0	0	0	0	0	1.8
7W	37	0	1	0	0	0	0	0	0	0	0.1
3W	39	2	0	0	0	0	0	0	0	0	0.2
4W	39	0	0	0	2	0	0	0	0	0	0.2
5W	39	0	1	0	0	0	0	0	0	0	0.1
Effort		24	24	25	25	25	25	25	24	24	221
Catch		44	32	2	14	14	10	3	0	0	119
C/E		1.83	1.33	0.08	0.56	0.56	0.40	0.12	0.00	0.00	0.54

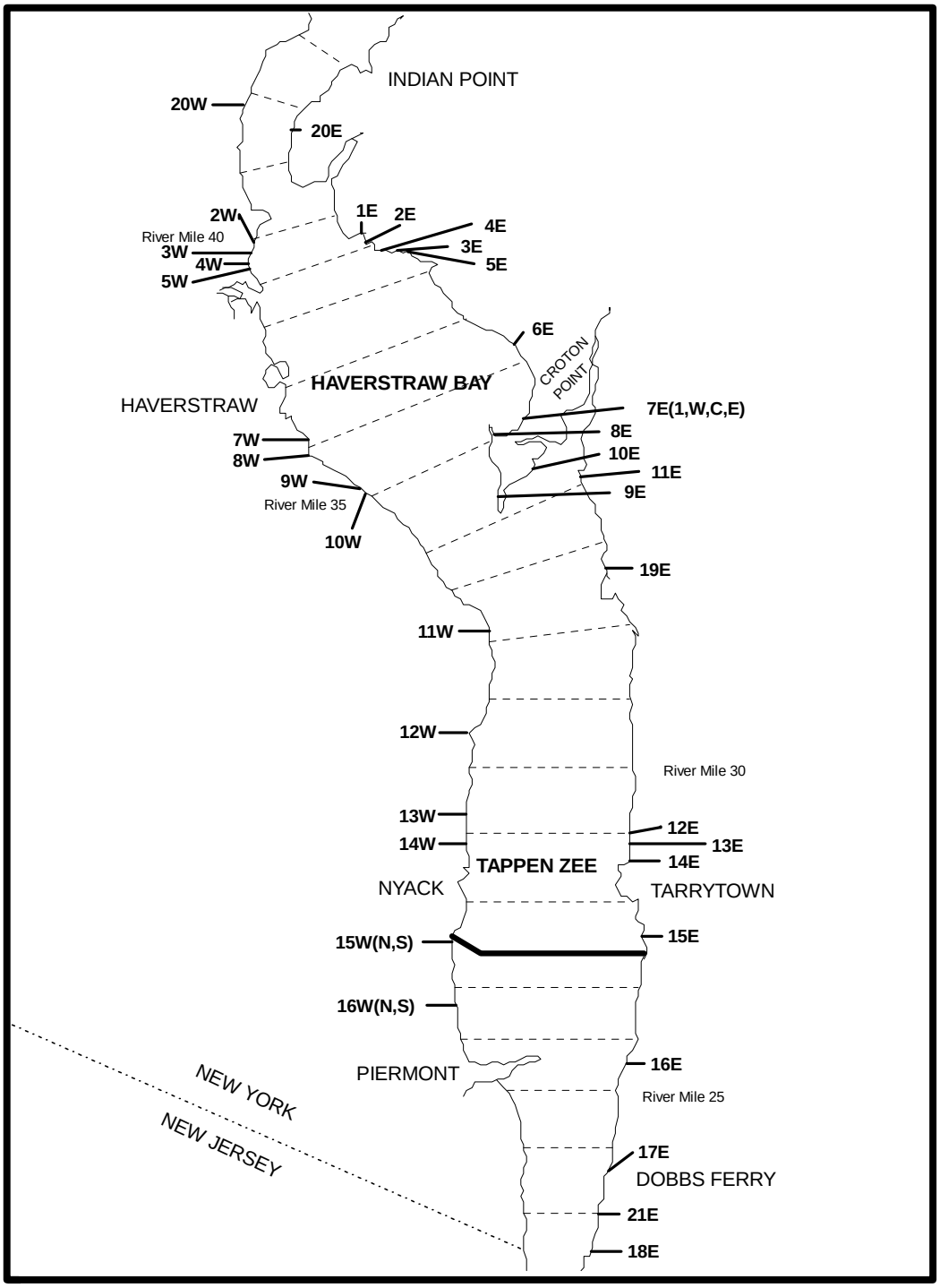

Figure 1. Hudson River striped bass survey map of station locations.

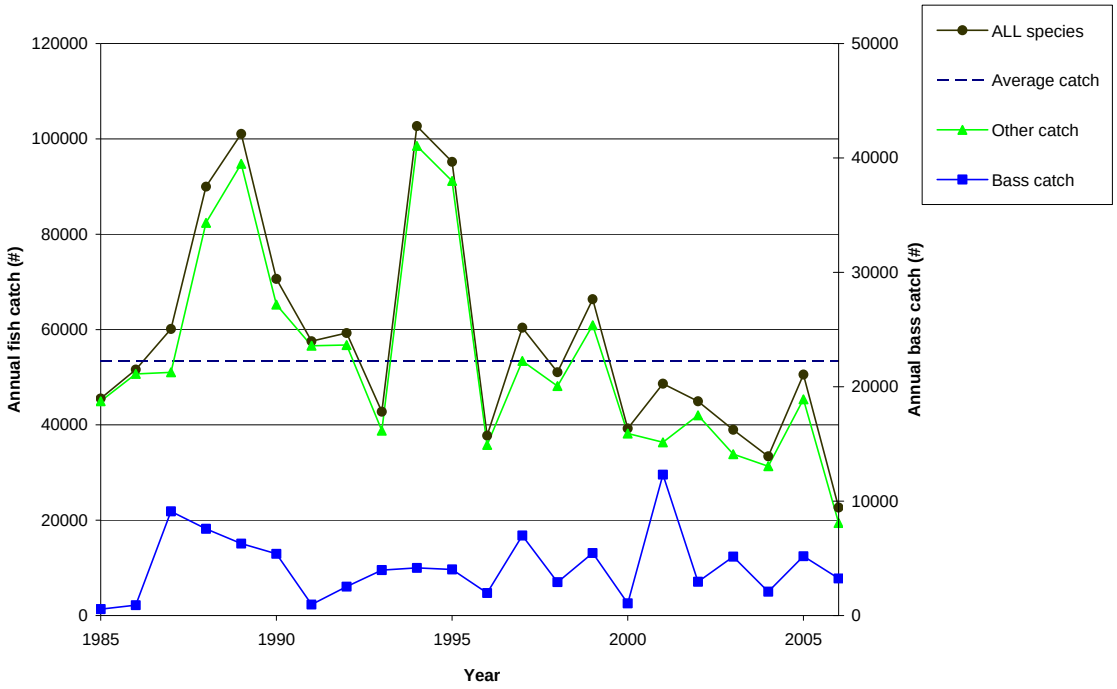

Figure 2. Catch of species from 1985 to 2006, using the 9-week survey period. The catch of striped bass (secondary y-axis) and the total catch with the bass catch subtracted are also included.

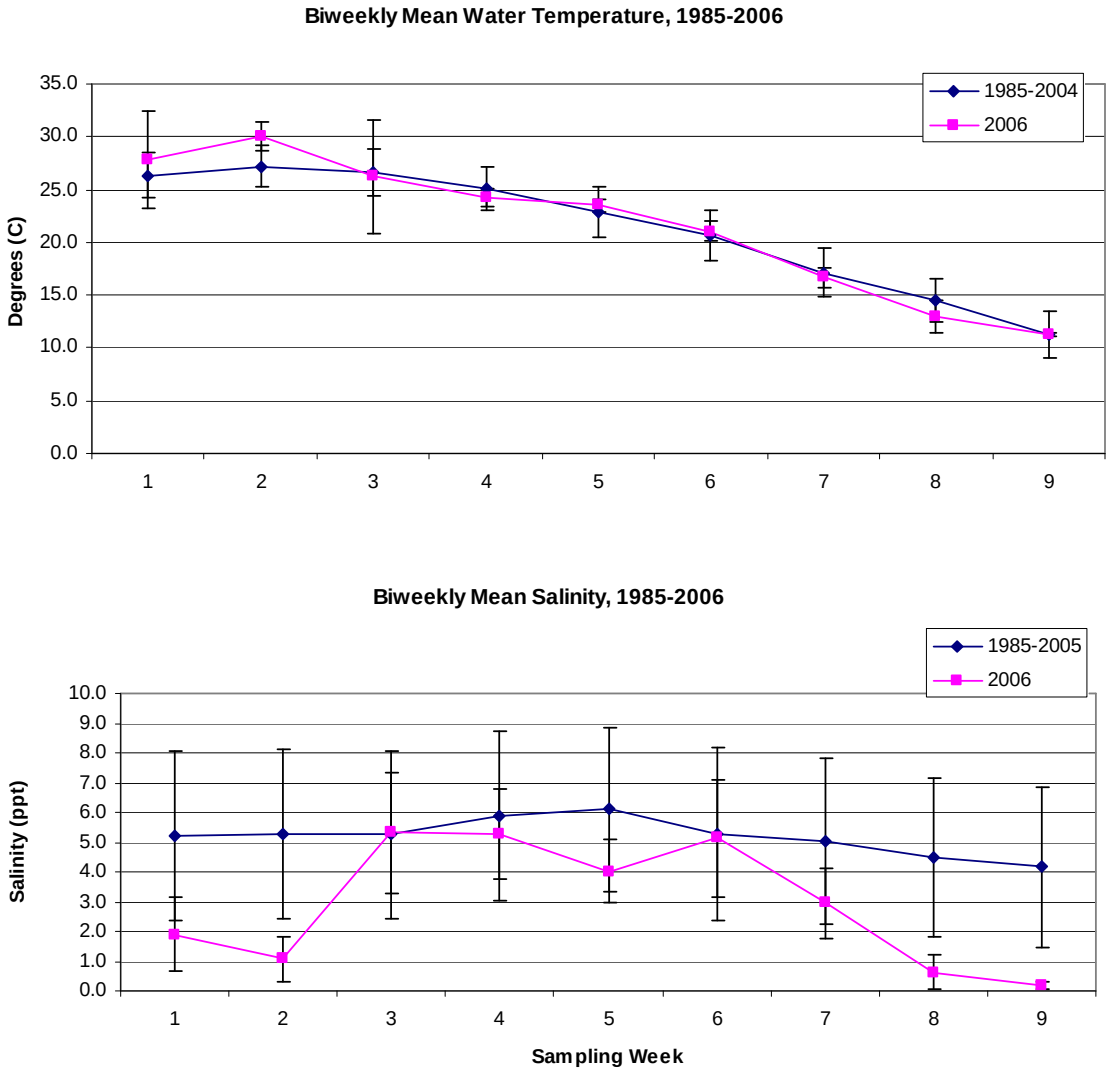

Figure 3. Biweekly mean temperature (top) and salinity (bottom) for each of the 9 sampling weeks. Data from present year (2006) and average conditions from full survey (1985-2005) are provided.

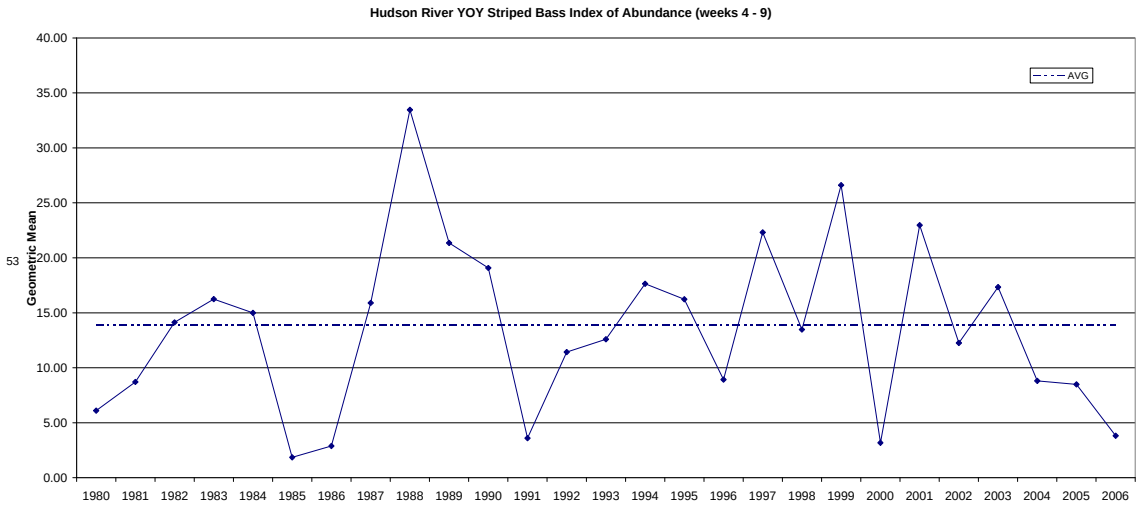

Figure 4. Striped bass YOY index of abundance (geometric mean) calculated for each survey year 1980-2006.

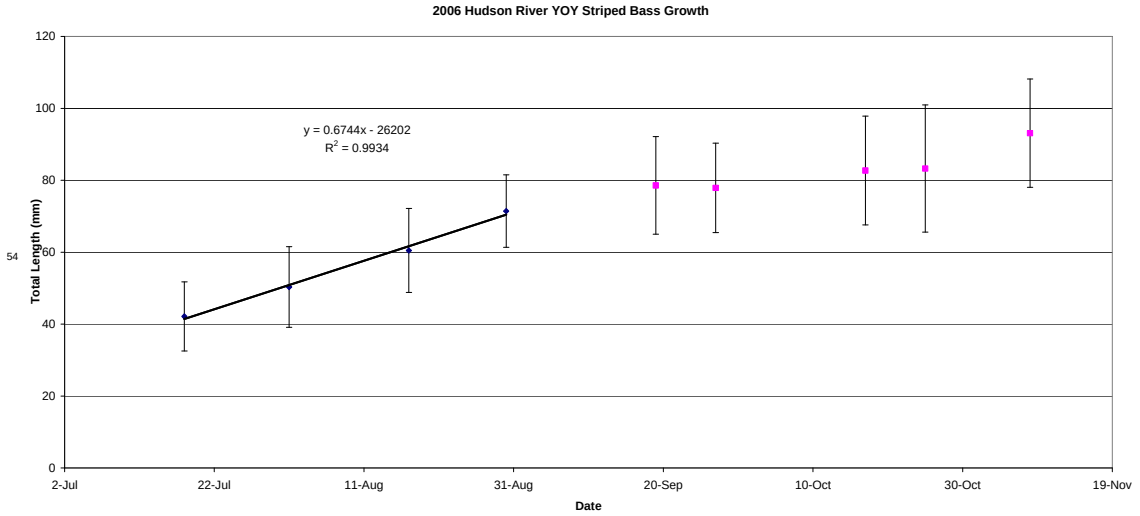

Figure 5. Striped bass YOY calculated growth rate for 2006.

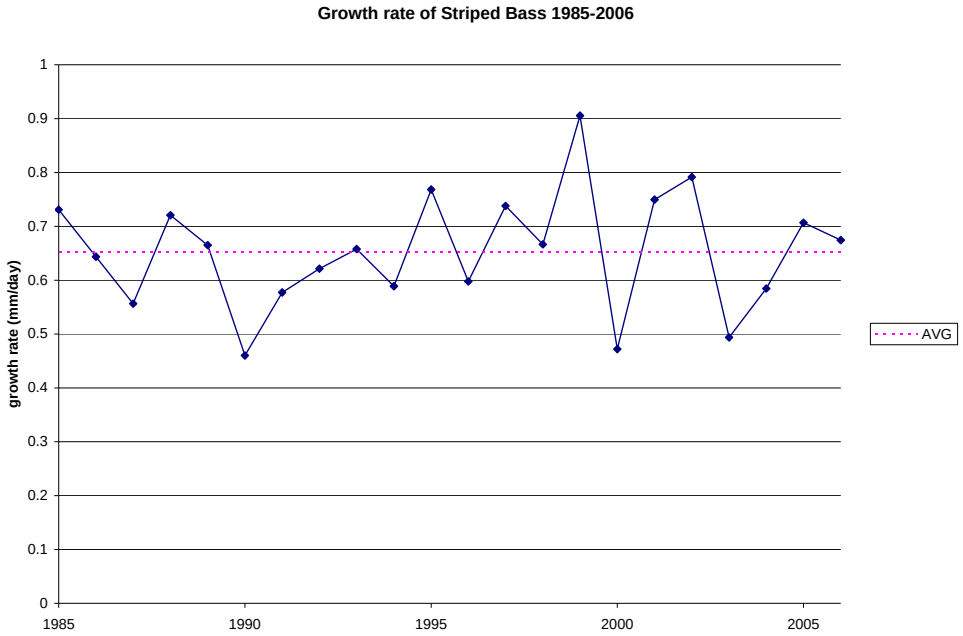

Figure 6. Striped bass YOY growth rate for each survey year 1980-2006.

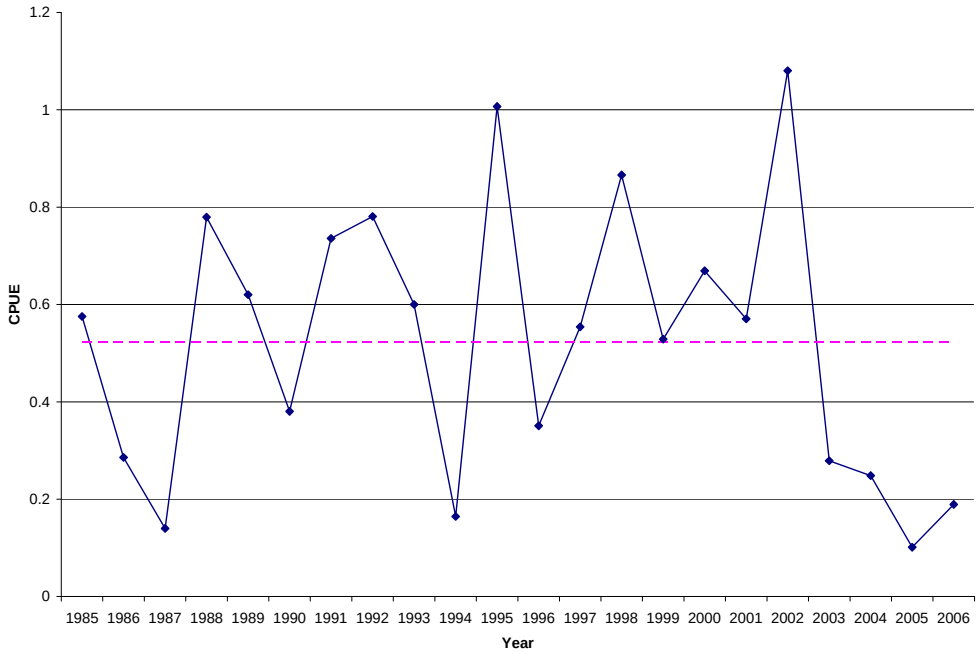

Figure 7. Older (1+) Striped bass catch per unit effort (CPUE) calculated for each survey year 1980-2006.

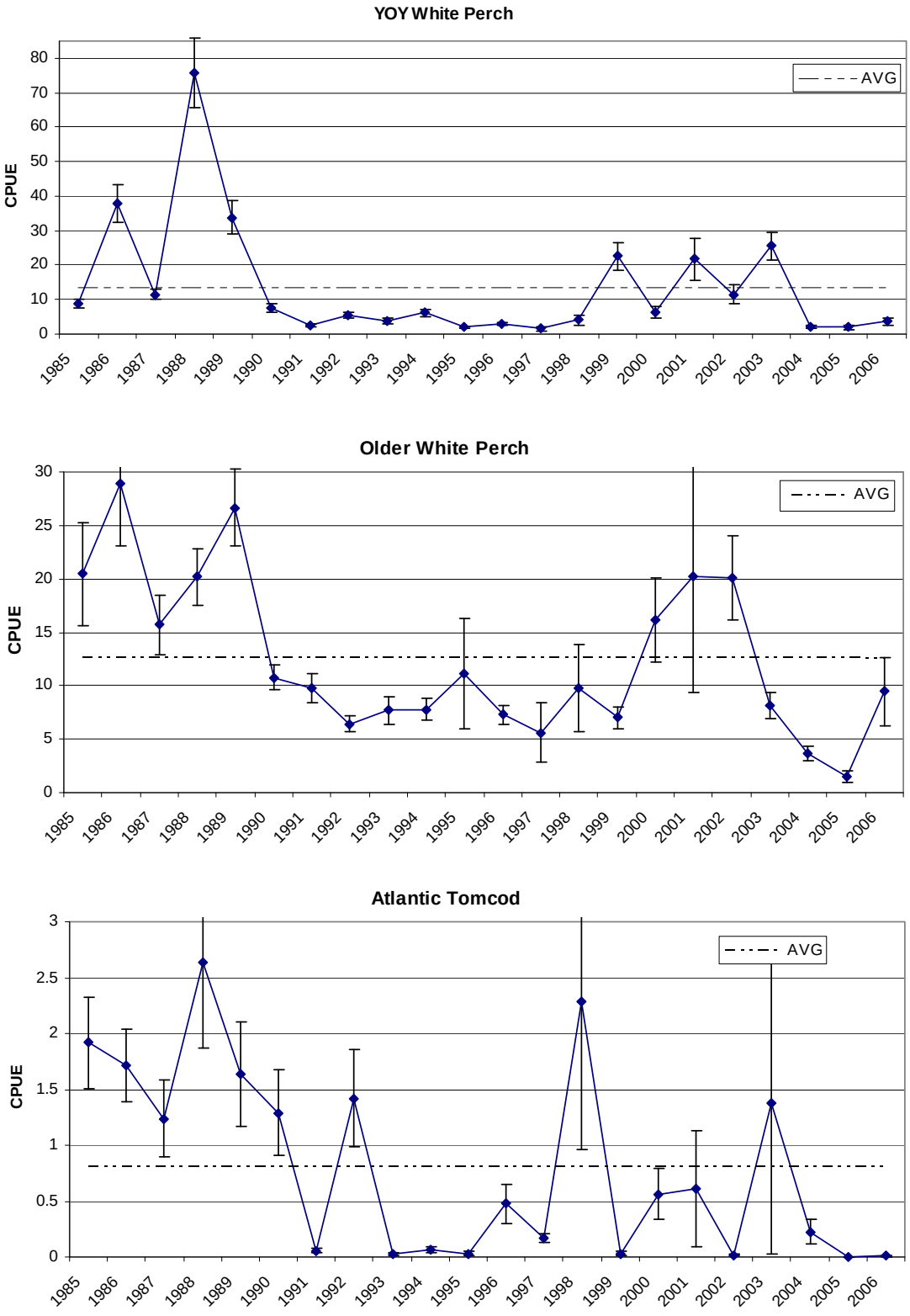

Figure 8. Catch per unit effort (CPUE) for each survey year for YOY white perch (top), older white perch (middle) and Atlantic tomcod (bottom).

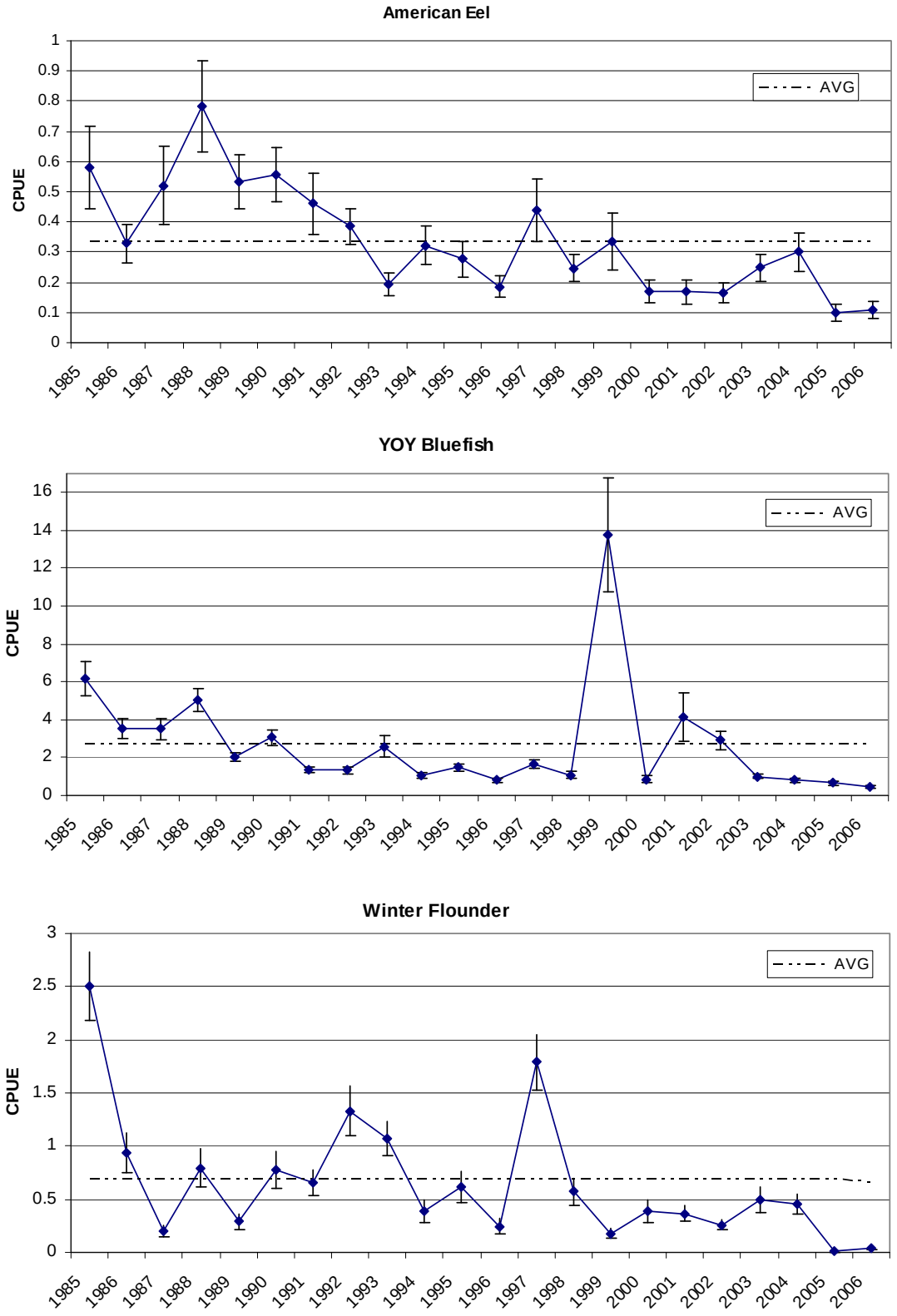

Figure 9. Catch per unit effort (CPUE) for each survey year for American eel (top), YOY bluefish (middle) and winter flounder (bottom).

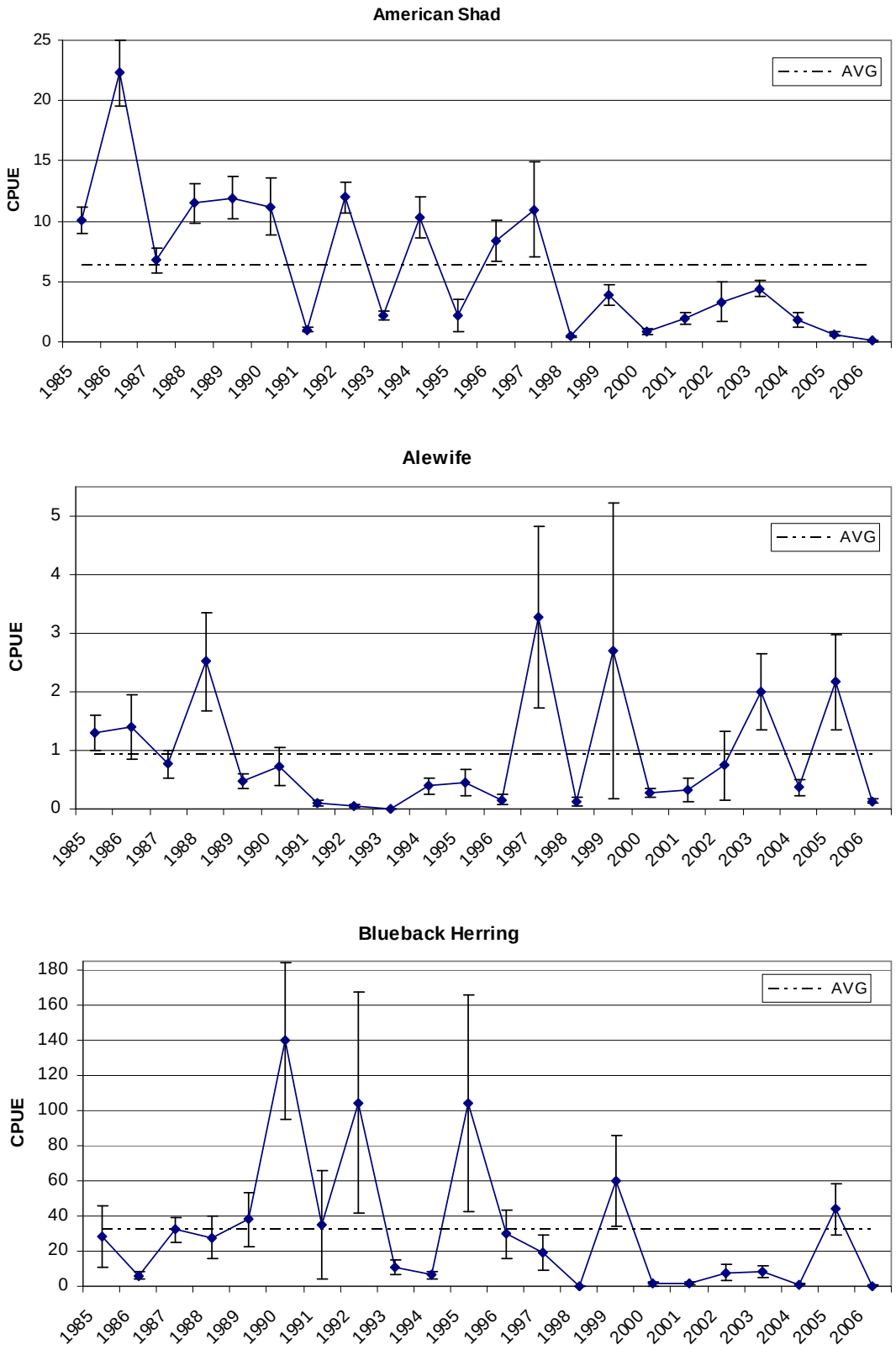

Figure 10. Catch per unit effort (CPUE) for each survey year for American shad (top), Alewives (middle) and blueback herring (bottom).

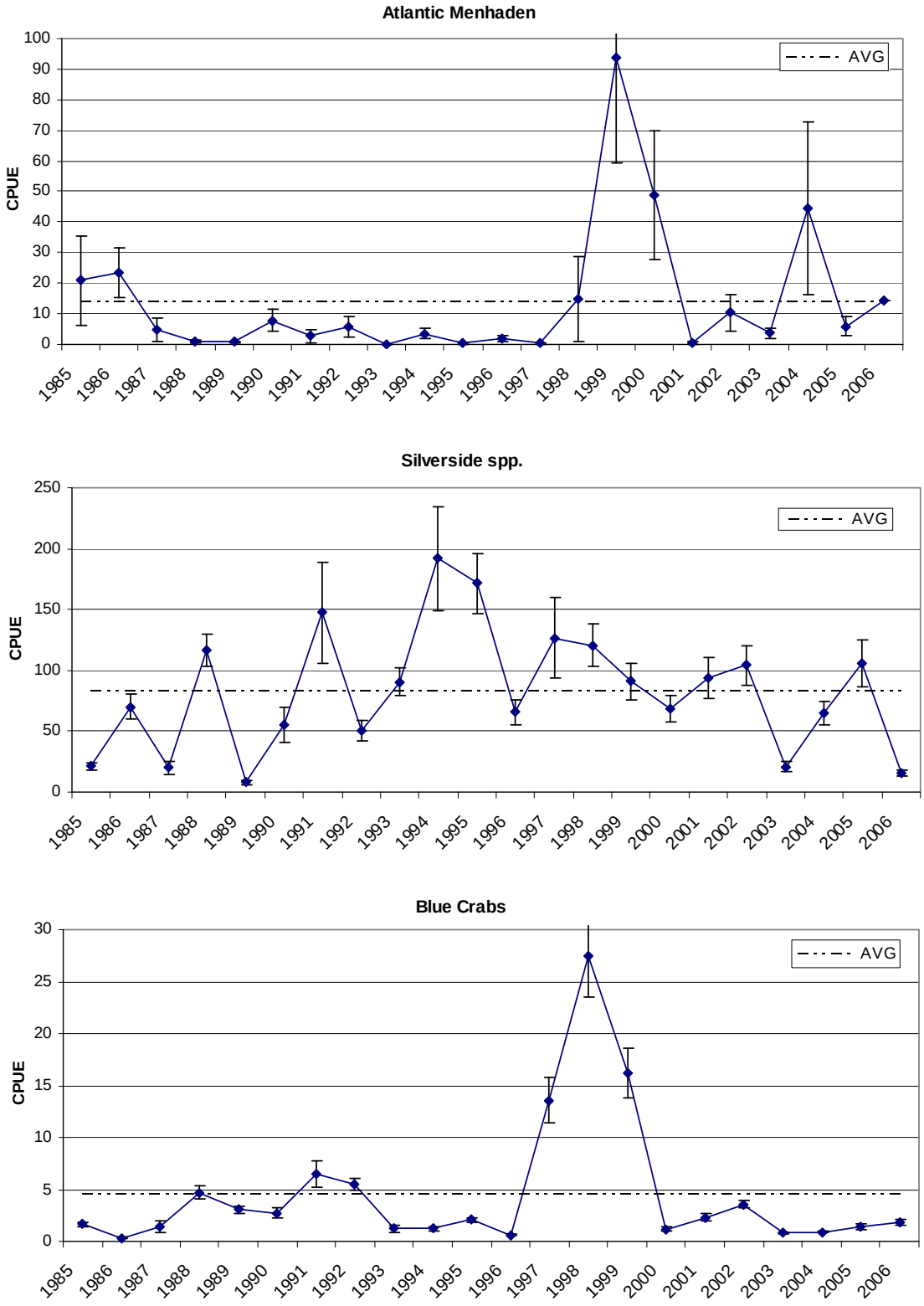

Figure 11. Catch per unit effort (CPUE) for each survey year for Atlantic menhaden (top), silversides (middle) and blue crabs (bottom).